April 1975

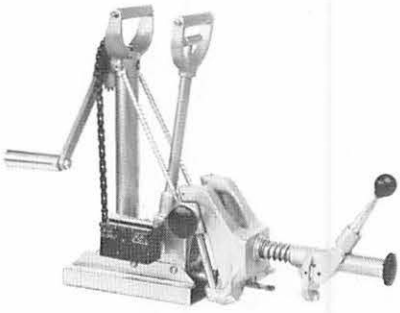
# THE Signalmans

## C&NW maintainer George Hansen checks crossing signal approach track circuit p.9

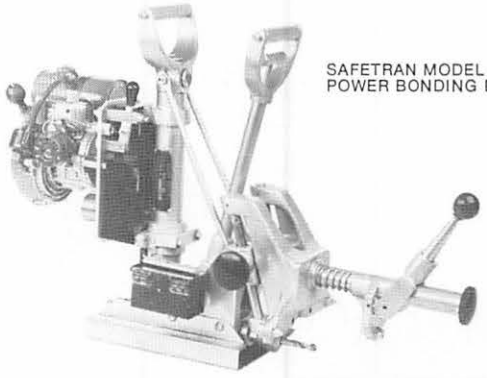
JOHN A STRUBLE 123
410 N THOMAS ST
SCOTTVILLE MICH 49454

## For Rail Bond Maintenance, Renewal or Replacement

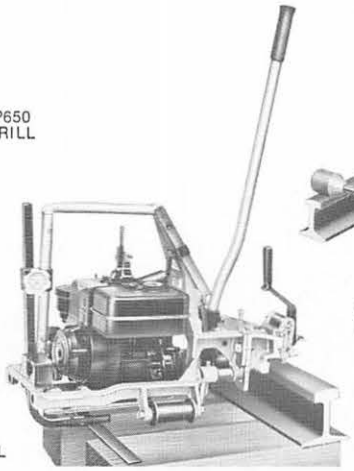
# by hand or by power- buy Safetran



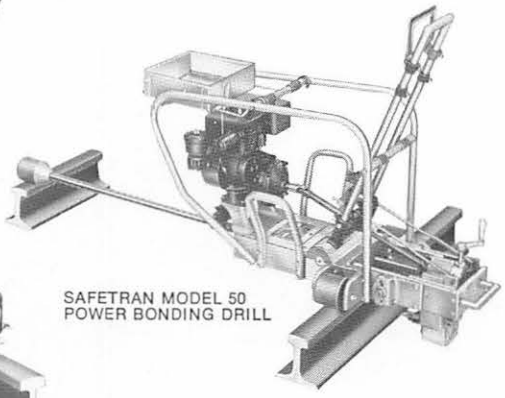
SAFETRAN MODEL 650
HAND BONDING DRILL



SAFETRAN MODEL P650
POWER BONDING DRILL



SAFETRAN MODEL 575
POWER BONDING DRILL



SAFETRAN MODEL 50
POWER BONDING DRILL

2 TYPES OF
TRACK CONNECTIONS
ARE AVAILABLE

1
SAFETRAN RPC-10
RAIL CONNECTION PLUG

2
SAFETRAN
DOUBLE AND
SINGLE ENTRY
STRANPINS

SAFETRAN
"900" BOND

**Safetran Bonding Drills** are designed for simple, accurate and fast operation. They are fully adjustable to produce bond holes in head or web of rail. To insure accuracy, units are equipped with built-in levels. All models are available with either screw or collet-type chucks. Specify either 3/8″ or 9/32″ diameter chuck. Simple clamp grips rail with a lever action instant release. All are portable heavy duty units capable of providing excellent service over prolonged periods of operation.

For complete details and ordering information on Safetran's Hand and Power Bonding Drills, Bonding Bits, Bond Strand, Bond Wire, Stranpins and Bonding Tools see Section 14 of your Safetran Catalog or write:


**Safetran Systems Corporation**
7721 National Turnpike • Louisville, KY 40214 • (502) 361-1691

# The Signalman's JOURNAL

OFFICIAL PUBLICATION BROTHERHOOD OF RAILROAD SIGNALMEN

Robert W. McKnight, Editor and Manager

601 W. Golf Road, Mount Prospect, IL 60056

Telephone: 312-439-3732

**April 1975**

**Vol. 56 No. 3**


## Features:


**Chamberlain:** Labor has dialog with rr management ..... 4

Signal maintainer solves crossing problem ..... 9

Long Island electronic shop is in service ..... 10

How pulse modulated track circuits operate ..... 12

Penn Central signalmen restore circuits ..... 13


## Departments:


Local Lodge News ..... 23

News ..... 14

News About Members ..... 24

News From Canada ..... 28

Obituaries ..... 27

**Personal Aids and News:**

Facts about wives annuities ..... 18

How to save your automobile ..... 20

FELA attorneys listed ..... 29

**Signal RS&I:** FRA rules on signal systems ..... 16

**Signalman's Store:** Things to buy from BofRS ..... 25

**Signalman's Worksheet:** AC track circuits & relays ..... 30


**Cover:** C&NW signal maintainer George Hansen checks crossing signal approach track circuit (Paddock Publications Photo).


Copyright © 1975 Brotherhood of Railroad Signalmen





**POSTMASTER'S NOTE:** Please report all undeliverable magazines to The Signalman's Journal, 601 W. Golf Road, Mount Prospect, IL 60056 on Form 3579. Subscription rates: $3 per year in U.S. and Canada; $7.50 per year elsewhere. Single copy: 50¢.

**ADDRESS CHANGE:** B. of R.S. members or other subscribers should promptly advise the editorial office, 601 W. Golf Road, Mount Prospect, IL 60056 if this magazine is coming incorrectly addressed or if they change their address.

The Signalman's Journal is printed monthly (except bi-monthly January-February and July-August) at 213 W. Madison St., Waterloo, WI 53594 by the Brotherhood of Railroad Signalmen. Second class postage paid at Mount Prospect, IL and at additional mailing offices.



GRAND LODGE DIRECTORY

C. J. CHAMBERLAIN, *President*
601 W. Golf Road
Mount Prospect, IL 60056

R. T. BATES, *Sec'y-Treas.*
601 W. Golf Road
Mount Prospect, IL 60056

A. E. LYON, *Pres. Emeritus*
1117 So. Wilke Road
Arlington Heights, IL 60005

JESSE CLARK, *Pres. Emeritus*
908 So. Park Drive
Terre Haute, IN 47802

**Vice Presidents**

W. W. ALTUS
220 South State Street
Chicago, IL 60604

J. T. BASS
Office 201
3121 East Colfax Avenue
Denver, CO 80206

W. D. BEST
601 W. Golf Road
Mount Prospect, IL 60056

C. S. CHANDLER
4243 Forest Avenue
Paducah, KY 42001

M. B. FRYE
601 W. Golf Road
Mount Prospect, IL 60056

J. E. PLATT
1396 Ste. Catherine St. W.
Suite 323
Montreal, Que. H3G 1P9

J. W. WALSH
Railway Labor Bldg., Suite 804
400 First St., N.W.
Washington, DC 20001

**Director of Research**

J. E. HANSEN
601 W. Golf Road
Mount Prospect, IL 60056

**Grand Lodge Representatives**

W. B. HARWELL, JR.
601 W. Golf Road
Mount Prospect, IL 60056

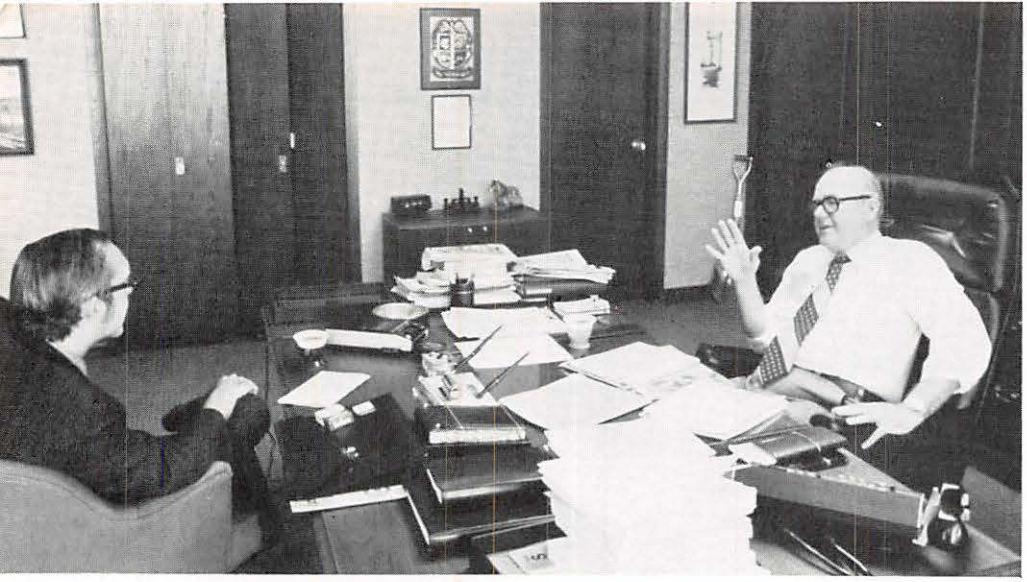
R. R. MITCHELL
1833 Pembina Highway, Apt. 200
Winnipeg, Man. R3T 2G6

**Board of Trustees**

W. W. LAUER, *Chairman*
122 W. Franklin Avenue
Monmouth, IL 61462

G. A. HARRINGTON, *Secretary*
P.O. Box 489
Cheraw, SC 29520

JOHN MCCORMICK, *Member*
10369 Belleville Ave.
Montreal, Que. H1H 4Z6



**C. J. Chamberlain,** BofRS president (right) describes recent wage negotiations to **A. G. Welty,** senior editor, Railway Age.

# Labor has dialog with rr management

*C. J. Chamberlain, president, Brotherhood of Railroad Signalmen, was interviewed March 4 by Railway Age Senior Editor Gus Welty. This wide-ranging interview also covered Chamberlain's duties and responsibilities as chairman of the Railway Labor Executives' Association. This interview was published in the April 10 issue of Railway Age.*

**RAILWAY AGE: People keep wanting to believe that it's a new ball-game today in rail management/labor relations. Is it, really?**

**CHAMBERLAIN:** I've been involved as a local lodge and general committee officer since 1938 and I've been actively involved in grand lodge work since 1957. It's my view—and, I think, railroad labor's view—that the atmosphere with respect to collective bargaining is much better today. Certainly it's better than it's been at any time since I've been active in union affairs.

**RAILWAY AGE: Why?**

**CHAMBERLAIN:** We've said for a long time that if there's to be true collective bargaining, there has to be dialog. All of us on both sides have known, in past negotiations, that eventually there would be a settlement—but so often it was an imposed settlement, and we couldn't see much sense in just blindly going on down that road. This time we had dialog, we got a settlement—without anybody intervening. It was negotiated across the table, with meaningful participation on both sides. And I have to take my hat off to Bill Dempsey (chairman of the National Railway Labor Conference) and to the people working with him, but primarily to Bill because he's the top negotiator. He's fair, and he's a man of integrity. He's shrewd, sure, but that's his job just as it's our job. Keeping in mind all of the problems we had to face in connection with the Railroad Retirement issues in 1973 and keeping in mind the economic situation in '74 and '75, I think we did a tremendous job in the most-recent negotiations. I'm proud of it. We proved that collective bargaining can work.

**RAILWAY AGE: In '73, though, agreement was pretty much across-the-board. This time, only a few unions have actually settled, there was that shopcraft strike, there are mediation cases . . .**

**CHAMBERLAIN:** Keep in mind that the gut issue then was Railroad Retirement. We had a gun at our heads, because Congress had told us to do something about restructuring the system or they would do it for us. I think that prompted everybody to agree to what we were able to work out. Looking back, I suppose it wasn't the best judgment to settle for only a 4% wage increase in 1974. But nobody could know what kind of inflation we were going to have. We've rectified that in the new agreement, with the cost-of-living escalator and the front-loaded wage package which picks up in part the losses our people sustained last year.

**RAILWAY AGE: But what about the holdouts now?**

**CHAMBERLAIN:** We had a meeting of the majority of railroad labor unions late last spring, for the primary purpose of trying to coordinate all of our different ideas into notices that made some sense. This was all informal, and nobody was going to be bound by what was decided. But we were able to come up with uniformity on wages and other common items. Still, with one exception, we all had lists of special items that were peculiar to one or a few unions. I think it's generally recognized that if one or a few unions can get a fair settlement on the big issues such as wages and health and welfare that settlement tends to be a pattern. But there's no doubt that we have a stumbling block in those issues which are peculiar to a particular organization. That seems to be the hangup now.

**RAILWAY AGE: How did negotiations on the broad issues actually go?**

**CHAMBERLAIN:** In the mass negotiations with all of us, the carriers came in with what I termed a responsible offer. It was a three-year-proposal, with increases of 8%, 3% and 3%. Never before had that kind of money been placed on the table initially. It was certainly a signal to me and, I think, to others that the carriers were making a serious attempt to negotiate in good faith and get an agreement across the table through collective bargaining. Right away, we said that if wages were right on the front end, then we felt we could resolve anything on the back end with respect to special items. We've found, though, with respect to the so-called "laundry list," that most of the items don't affect our membership nationally as wages, health-

and-welfare or a cost-of-living clause do. We said that if there was an avenue available to us to take care of these more-or-less local issues on local properties, we would do this. And that's the type of agreement we worked out, with binding arbitration to resolve matters if we can't work them out through negotiation.

**RAILWAY AGE: In your ratification process, did you get much static because wage increases in the second and third years were relatively smaller, 3% and 4%?**

**CHAMBERLAIN:** A lot of questions were raised, some of them on that point. Our answer was that, with the 10% and 5% 1975 wage increases we came out in pretty good shape in the first year. Then, with the cost-of-living escalator and a roll-in provision, we have protected our people, we have protected the real wage progress they make. We've also eliminated a possible bargaining obstacle the next time around, because now we have a c-o-l escalator formula that in the last application in 1977 produces one cent per hour increase for each .3 of a point rise in the CPI index. I expect it to remain in future contracts.

**RAILWAY AGE: With so many unions still unsigned, do you expect a real confrontation?**

**CHAMBERLAIN:** That, my friend, is a loaded question. I would say this: Nobody, no other union chief, has come to me and said he was dissatisfied with the basic terms of the agreement. If there is dissatisfaction, it has to do with those particular issues affecting individual unions.

**RAILWAY AGE: BofRS was able to work something out in this. Why weren't others?**

**CHAMBERLAIN:** The issues themselves were different, and sometimes there are other problems within a union that demand different approaches. I understand there's dialog between the carriers and a number of organizations, and I hope they can work things out. We just happened to do it sooner.

**RAILWAY AGE: Was this partly a matter of negotiating strategy?**

**CHAMBERLAIN:** Sure. When Bill Dempsey came in with a meaningful proposal, which was later raised a bit, some of us caught the signal. Some others felt that they had to know first what was available on the front end before they would move on the other than common issues. Well, the situation had almost come to a stage of impasse because management refused to put something more on the table on the common issues while they're still facing a list of unknowns with respect to non-common issues. Finally, Dempsey said the carriers were prepared to move but with those organizations that had indicated that they were also prepared to move. That turned out to be the Signalman, the United Transportation Union, the Brotherhood of Maintenance of Way Employees and later, but separately, the Sheet Metal Workers. Now, all the time that the talks were moving ahead from there, we kept the other organizations fully informed, as we hoped that they would be able to settle their individual differences and come back in to the mass negotiations, but it just didn't happen that way.

**RAILWAY AGE: In this agreement and in the '73 agreement, the pattern has seemed to be that labor got wage and benefit improvements and gave up nothing, in terms of rules, for example. It's inevitable that somebody is going to start wondering what is going on here.**

**CHAMBERLAIN:** That's a valid point. There were no rules changes, for ops or non-ops. There weren't any counter-proposals. But this doesn't mean that we are not moving. I could cite a number of areas of movement, with respect to our organization in connection with mergers and on individual properties in which we have worked out arrangements which give the carrier more flexibility in its operations. Most of this takes place behind the scenes—on individual properties. It doesn't get much national attention. But the management/labor relationship is not a one-way street, it is not always a case of our demanding and not giving. We are giving.

**RAILWAY AGE: But on a local basis . . .**

**CHAMBERLAIN:** Right. We're finding out that there are a lot of issues that you just don't handle nationally. The bargaining table in Washington is the place to take care of the common issues, those that affect all employees in a certain organization or all employees in the industry. But you can't do everything in Washington.

**RAILWAY AGE: One of the key points on which labor has hung tough involves the whole area of stabilization, contracting-out. Is there some way of attacking this problem that might be fair to both the carriers and labor?**

**CHAMBERLAIN:** I think so. As you know, we worked on this in connection with the Surface Transportation Act last year. We were able to come up with an agreement to the effect that the issue of contracting-out would be put to negotiation on individual properties and that if there was no agreement then the union did have a veto power. The railroad negotiators bought that, and I think it was because of the mutual trust we have for each other. Listen, if there is a problem and if you can have dialog, sit down and talk about that problem with any union, you're going to find union people reasonable. Nine times out of 10, you're going to be able to work it out. It's when a carrier just goes ahead and does something unilaterally that you run into all the problems and get into a brawl. As you also know, when we got to Congress with that contracting-out provision in the legislation, we ran into opposition and that provision was removed from the proposed legislation. The surface transportation legislation was not enacted by the last Congress, however, I'll tell you this: We are not going to back away on this issue when it comes up before this session of Congress.

**RAILWAY AGE: Contracting-out of work isn't really a major problem for the Signalmen, though . . .**

*CJC: 'The atmosphere with respect to collective bargaining is much better today.'*

**CHAMBERLAIN:** No, though it can be. But we believe we have some answers, and let me give you an example of what we've done—we've done it quietly, without any fanfare, but it's working. In the Southeast, primarily in Florida, railroads have been ordered to install grade-crossing protection within a certain time-frame, with government funds paying for it. OK, I know what your next question is going to be: "Even if the money is there, what happens if the railroad doesn't have the forces to get the job done by the deadline?" Of course, we look at the carrier's record to see what has been done about beefing up forces, and some of those records do show that the carrier has made some kind of effort and in fact has increased its forces. Some don't. Where we have encountered the problem and where the carriers have increased their forces and still are unable to get the work done within the time-frames stipulated by the state or federal government, we have been able to work out agreements which satisfy our requirements and still permit the work to be done, on time.

**RAILWAY AGE: And those agreements provide . . .**

**CHAMBERLAIN:** Simply, they provide that certain bona fide contractors with the expertise and the experience to do the work competently can bid on certain crossing protection-installation jobs if they have an agreement with us under which the employees working on these jobs are covered by our contracts. Those employees become full dues-paying members of BofRS, regardless of whether or not they may be members of some other union. They come under all the provisions of our contracts, they get the wages and benefits our contracts provide. We have kept tight control over the situation, but it's working out very well—and the work is being done.

**RAILWAY AGE: What about the reaction of your own people who are and have been railroad employees?**

**CHAMBERLAIN:** We've had objections, sure. Talking about contracting-out is just like waving a red flag in the faces of a lot of people. People say "You've sold us out." Well, that isn't the case at all. It's no different than if the carrier had supplemented its own forces. All conditions of employment and union membership are the same. And yes, I guess this may be unprecedented in the industry. But it's worked to the benefit of both the BofRS and the carriers and we're getting the job done.

**RAILWAY AGE: It's hard to understand objections from your members, if all of these conditions are being satisfied . . .**

**CHAMBERLAIN:** I think all of us have been prone to mistakes when we've talked about job stabilization, and some of our members have been led into misunderstanding the meaning of job stabilization. Some people think it means that "I have a job for life, this job, is right here, and nobody else will ever do it." That's not the purpose of a job-stabilization agreement. That kind of agreement guarantees employment, yes—but it doesn't guarantee work coming to a particular individual at a particular place. We've had people come to us and say "Look, I don't care if it takes 100 years for the railroad to install that crossing protection, it belongs to me as an individual, it's my job and it's job security and you stretch it out as long as you can." Well, crossing protection isn't put in to help the railroad. It's put in for only one reason—a public need, safety, to save lives of both railroad employees and the general public, your life, my life, anybody's life. It's taking too long now to get these proective devises installed, because all of that work should have been done yesterday. And you pick up a newspaper too often and read about an accident, a car, a truck, a school bus loaded with kids. It's pretty hard to sleep nights, if you have to think you've been a party to delaying the installation of protection that might have prevented an accident. So, am I going to stand up and say "Hey, we're not going to go along?" No way—and anybody who thinks I'll say something like that is wrong. That's where I draw the line on being a politician within the organization. We want to get that crossing protection in as fast as possible, and we've found that we can do it and protect the work for our organization. Work you know, does not flow to an individual. It flows to an organization. Members of that organization have the right to perform the work—but as members of the organization, not as individuals. There's been a lot of wrong thinking on this point and, as I said, some of this is probably the fault of union leadership that has not explained things right. We're trying to change this, but it's tough. Railroad labor is tough. Railroad people, both labor and management are not too receptive to change.

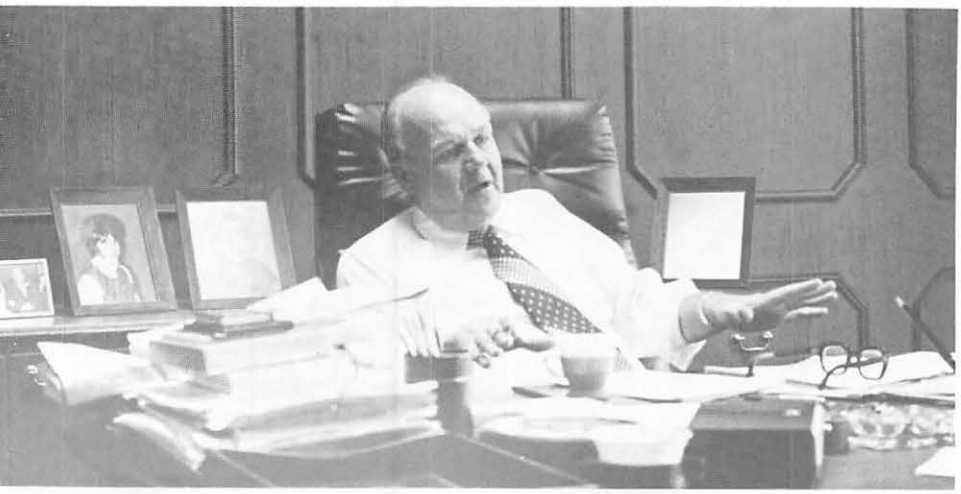
**RAILWAY AGE: Anywhere?**

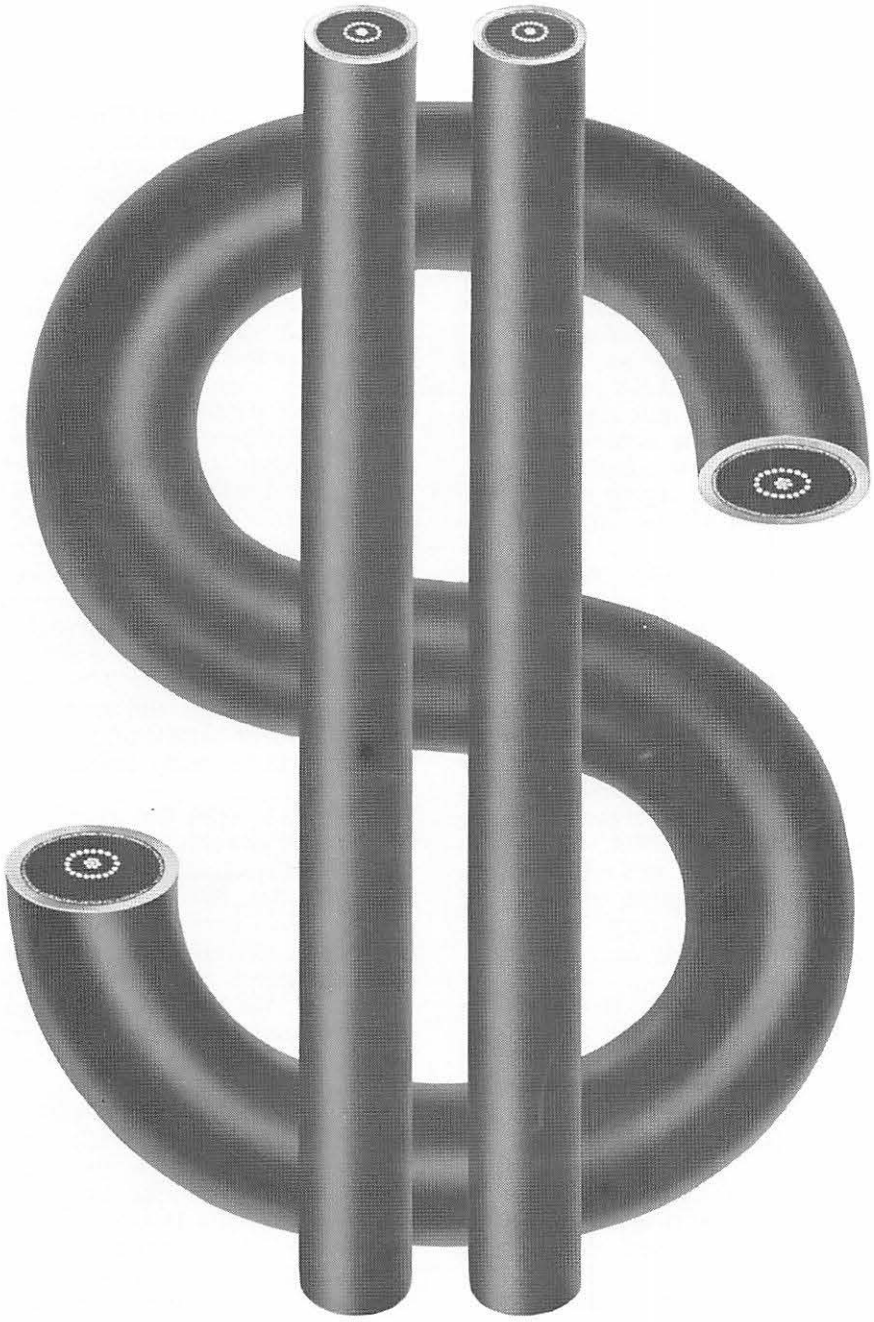
**CHAMBERLAIN:** Sure. It applies to people on both sides of the table. We've all been sort of locked in, creatures of habit. But you can't be locked into old ideas, because that spells oblivion.

**RAILWAY AGE: One new idea in rail labor is that rail labor ought to begin again to speak with one voice, or almost so. What about this reunification of RLEA, where most of the unions that became members of the Congress of Railway Unions are coming back to become affiliates of RLEA?**

**CHAMBERLAIN:** There were a lot of reasons why some unions broke away to form CRU, issues

*(Please turn to page 8)*





Today, it is more profitable than ever to invest in quality.

Reliability in cable is not a luxury, it's a necessity; replacement cost is prohibitive.

Specify Kerite! You get the Quality Assurance of 116 years of superior performance.

The Kerite Company • Principal Offices: Boston; Chicago; New York; Philadelphia; San Francisco; and Seymour, Connecticut • Sales Representation throughout the United States. A subsidiary of Harvey Hubbell Incorporated.

MEMBER RPI Kerite

the cable that lasts . . . and lasts . . . and lasts . . .

and personalities and so forth. But a lot of things have changed. We all worked very closely on the Railroad Retirement problem, and I guess a lot of us came to wonder: Why two organizations? Because we weren't really that far apart on the issues, and the personalities had changed and what it took was just for some people to start putting the pieces back together. A lot of credit must be given to the chief executives of the Congress of Railway Union affiliates and the RLEA affiliates for their cooperation and foresight in bringing about the reunification. We've done this, effective April 1, with the exception of the Brotherhood of Railway and Airline Clerks. And we expect that with the reunification RLEA's voice will be a very persuasive and influential voice.

**RAILWAY AGE: What RLEA had and will have again is affiliation of rather large and rather small unions . . .**

**CHAMBERLAIN:** We've taken into account, with a limited weighted vote based upon assessments, and assessments are based upon a cap of 50,000 members. On elections, it's still going to be a matter of one organization, one vote. But on other issues, any chief executive can ask for a vote on the weighted formula. Some people worry about this, but I don't. We've had the same sort of thing in connection with the management of Labor newspaper and to my knowledge a weighted vote was only asked for once, and that was a spillover from the RLEA/CRU split. Basically, I believe that RLEA, like a lot of other things, is a matter of getting involved. BofRS is a small organization, but we are not afraid to get involved. Our membership wants us involved so that we can do our part and make as great a contribution as a lot of bigger unions. As I see it, regardless of the size of the union if you aren't willing to get involved then you don't have a right to complain. That's the way it has to work.

**RAILWAY AGE: How binding is an RLEA position on its affiliates?**

**CHAMBERLAIN:** If a union differs on an issue or wants to take no position, all its representative has to do is say this and that union is free to stay out. In past years, before the split, I think RLEA was moving in a direction that did not follow its real objective or the purpose for which it was founded. It seemed that within the RLEA something was happening that was tending to take away the autonomy of the individual organization. But that's not what RLEA was formed for, and it's not the way RLEA will operate now. RLEA will be a strong voice for rail labor on matters of common interest, but we will never allow ourselves to get in a position of trying to interfere with a union's autonomy.

**RAILWAY AGE: How about RLEA as a voice supporting rail management on issues of common interest?**

**CHAMBERLAIN:** I don't know that you would want to tie RLEA too much to this kind of thing. I think the committee of chief executives of labor and management is a better forum or organization for doing this. But, RLEA will certainly be a voice that will reflect what's agreed upon in that committee. I look for great things from rail labor now, I really do.

**RAILWAY AGE: Great things, how?**

**CHAMBERLAIN:** In trying to help to put this industry back up where it was years ago, as No. 1 in transportation.

**RAILWAY AGE: That has to imply that you're going to be active in Congress and elsewhere in Washington . . .**

**CHAMBERLAIN:** Absolutely.

**RAILWAY AGE: Working on mutual-benefit programs?**

**CHAMBERLAIN:** Right. General Electric, I believe, has an ad or slogan "Progress is our most important product." Well, that slogan sure hasn't applied to the railroad industry, in the past; however, I am optomistic that despite all of the problems facing the railroad industry today, in the near future we can look back and confidently say that progress was made and will continue to be made. Of course, today we are in the midst of a severe economic crisis and we read about how many people are unemployed in the auto industry and about other layoffs and how terrible it is. Make no mistake about it, unemployment in any industry is a serious matter, however, I cannot help but relate the current unemployment in the other industries to what has taken place in the railroad industry in the past several years. Railroads are down to a little over a half-million people today, and 15 years ago we had three times that many. During the past years when the railroad industry was deteriorating and railroad employment declining, I can't recall anybody expressing concern over the railroad unemployment problem. In fact, they were ready to write us off as a dying industry. Of course, now that everyone recognizes that the national economy for many reasons needs our industry, the rail system will be rebuilt, railroad employment will be back up where it belongs, and the overall unemployment situation in the country will be vastly improved.

**RAILWAY AGE: But what about the money to build, to employ?**

**CHAMBERLAIN:** That's the hairy question. Sure, railroads want to stay away from nationalization, to stay in private ownership and OK. But things are going to have to change. We know that railroads have to have some help. They've been over-regulated. They've had to pay the full load in taxes. They've had to pay for full maintenance of the property, while other forms of transportation have been substantially subsidized by public money. Take, for instance, just a little item like a road crossing. Few communities have ever paid a cent for maintaining, repairing, crossings. But the crossing isn't there for the benefit of the railroad, it's there for the benefit of the community, and you can't touch a decent repair job for much under $10,000, and it isn't fair. Local communities, states and the Federal government have to put money into the industry. They've been subsidizing everybody else, and it's time they subsidized the railroad industry. Take the branchline problem, for one other example. Sure, what might be a light-density line today could be a heavy-traffic line tomorrow if a major industry locates on it. But who can say? And if that line is going to be maintained with light density of traffic if service is going to be maintained, somebody is going to

have to pay for it. Well, why should you penalize a railroad by making it maintain a stretch of track that has little or no business, at least now?

**RAILWAY AGE: How do you look at the United States Railway Association and Conrail, at least now?**

**CHAMBERLAIN:** Arthur Lewis (chairman of USRA) has talked with the labor organizations, and I'm impressed with his candidness. He's said "Come on over, let's get a dialog going." I think he's sincerely trying to do a job, and it's a tough job.

**RAILWAY AGE: How about your own outlook, as president of BofRS and as an individual?**

**CHAMBERLAIN:** First, BofRS has not suffered the membership decline that some organizations have. We were at about 17,500 in the early 1950s and we're at more than 13,000 now. When the work that has to be done on signal and communication systems starts being done, we're going to be right back up there. As for the way I feel, I'm optimistic. RLEA has been strengthened, by the reunification taking place April 1, and we've been able to work things out with railroad management without the problems we used to have. The past six months have been the best six months, I think, in my entire railroad labor career. I have no pessimism about the future, because we have proved—labor people and labor/management people—that we can get things done.

**Scouting today's a lot more than you think.**

Find out more.
Write: Scouting,
North Brunswick,
New Jersey 08902

**If you don't think Scouting's worth your time, you don't know enough about Scouting.**

# Maintainer solves crossing problem

One overcast December day last year, Chicago & North Western signal maintainer George Hansen received a call at his Barrington, IL headquarters that crossing gates at three streets in Palatine, IL were down with no trains approaching the crossings.

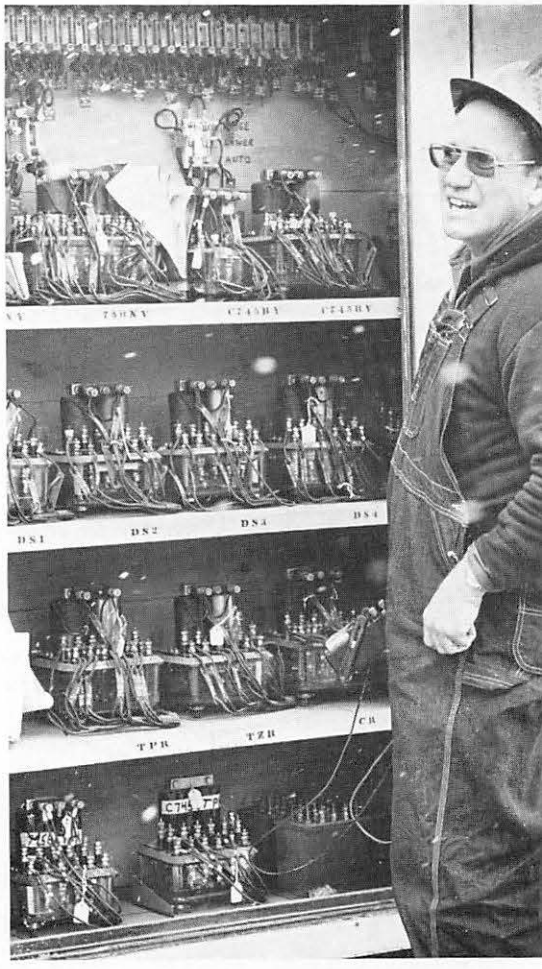
Although the trouble-shooting was routine, he had company which brought his vital but little noticed work to the attention of the public. On this particular day, reporter Steve Forsyth and photographer Dom Najolia of Paddock Publications were along to report Hansen's activities for their suburban newspaper readers.

Arriving at one of the crossings in Palatine, Hansen got out his volt-ohm-milliammeter and began walking the track, looking for broken bonds or other causes of trouble. He checked the track circuits for current and voltage—there being three tracks in this territory. At the Smith Street crossing, one approach circuit on the center track is dead—no current flowing. Checking a nearby relay case, Hansen determines which track circuit feed might be in trouble. In a nearby manhole, he finds one of the old-style Balkite rectifier has failed. Temporary repairs are made: the gates rise and flashers stop operating.

Sounds simple, when told, but the ease with which Hansen found the trouble is because he knows his work, his circuits and his equipment. Experience, knowledge and ability count greatly when trouble shooting. And it's most important in these situations where street crossings are blocked. There is the pressure to set things right quickly. Yes, the police are out to protect the crossings, but the public does not like to be delayed, for whatever the reason.

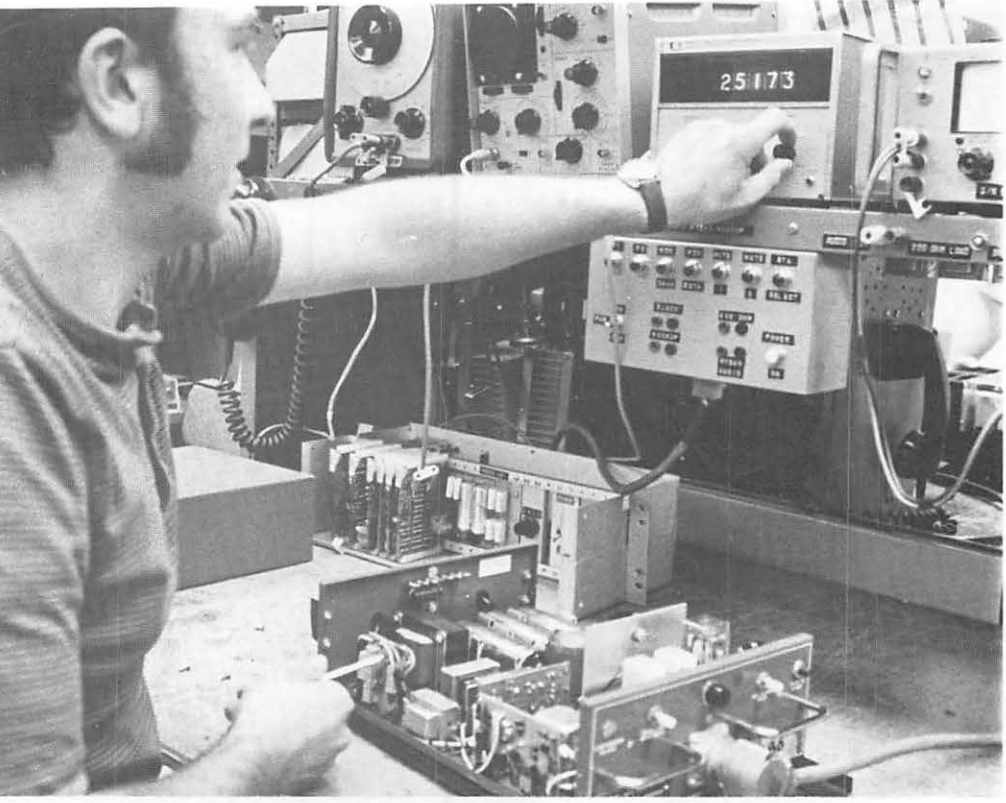
In this instance, however, the good publicity for the railroad and for maintainer Hansen will help make for an understanding public. The crossing warning systems are there to protect the public, and equally important, skilled, knowledgeable signal maintainers like George Hansen are there to see that the equipment operates as it should.

A member of the BofRS for over 20 years, Brother Hansen is a member of Local 130.



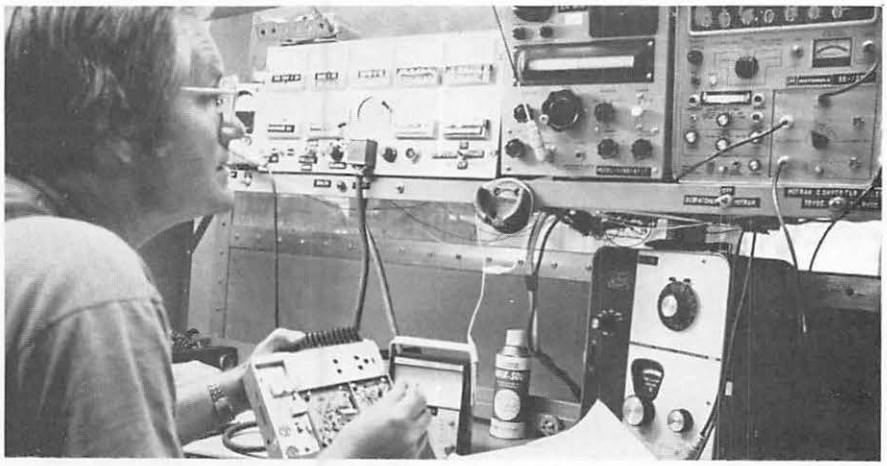
**George H. Hansen,** signal maintainer for the Chicago & North Western, has been a member of the Brotherhood of Railroad Signalmen since 1951. Camera "caught" him as he was checking crossing signal circuits in Palatine, Illinois. (Paddock Publications Photo.)

# LI radio shop is now in service



Pictures courtesy of Metro Lines, Long Island Rail Road.

**John Morris,** communications technician, checks the audio response of an M-1 car public address amplifier, at one of seven service benches.

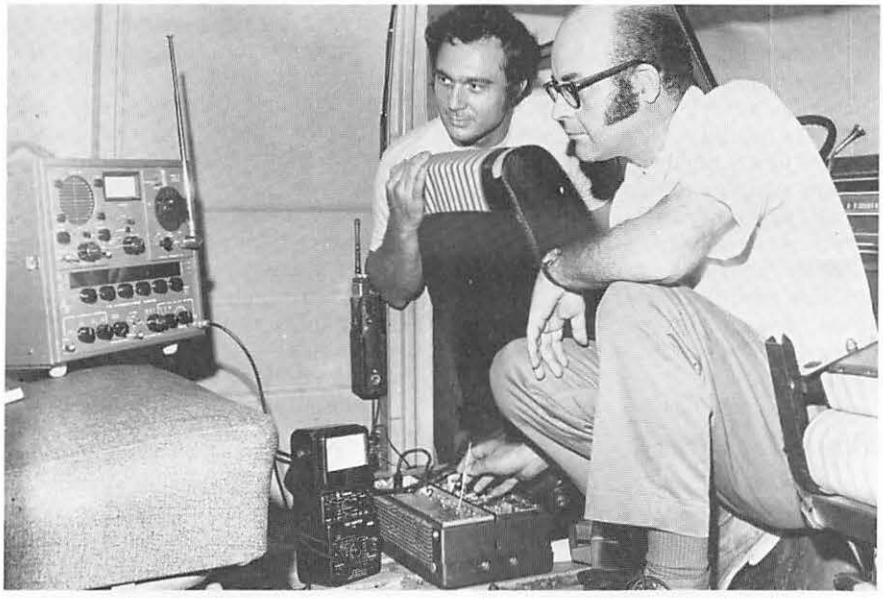


Communications technician **Ed Sumski** is testing an M-1 radio. Brother Sumski and colleagues are members of Aeriel Local 56.

Radio foreman **Bob Ingargiola** checks material parts lists.

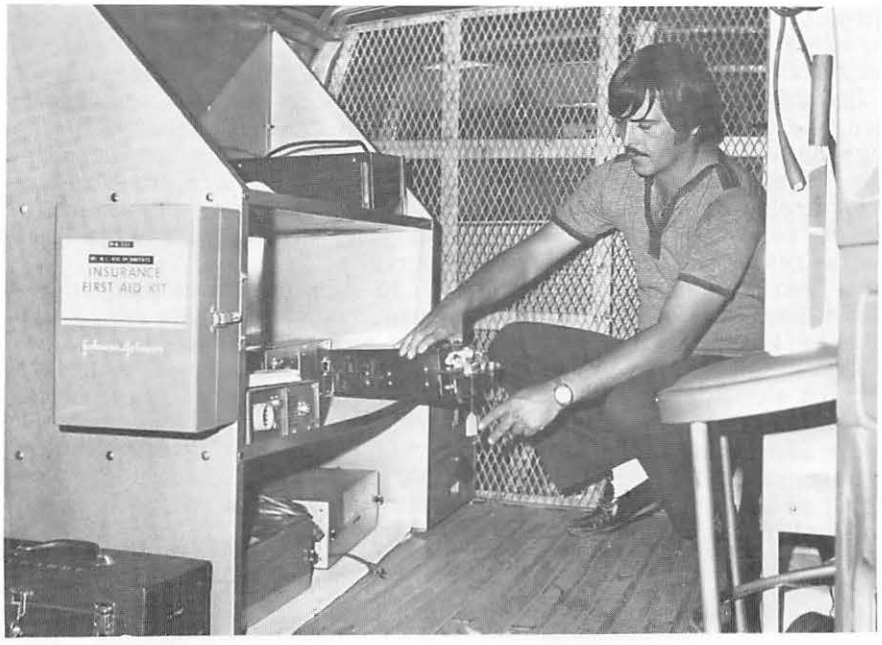
**Charles Latham,** communications technician, adjusts a power supply for one of LI's 382 train radio sets.

**Babylon radio electronic shop** handles both communication and signal electronic equipment. The building is open 24 hours daily with work handled on three tours.



Radio service truck has test equipment for servicing in the field. **Joseph Argiro** (left) and **Reuben Barreiro** align truck radio.

Communications technician **Jim Norbury** (left) discusses use of test meter with radio electrician **Frank Martinez.**




**Bob Eckhardt,** communications technician, removes spare chassis to service a wayside base station.

# How pulse modulated track circuits

*The following description of the Pulse Modulated Track Circuit is provided by James E. Moe, assistant to president-engineering, Cucamonga division, Safetran Systems Corp.*

The PMTC (for Pulse Modulated Track Circuit) is a modulated audio overlay with much higher security than other audio track circuits. It is specifically designed with the flexibility and integrity necessary for wayside signal control.

**Basic Concept.** The PMTC transmitter develops bursts of audio energy whose fundamental frequency is in the range of 156 to 1770 Hz. These bursts are sent in pairs with an accurate timing between bursts which is the signature of a given code. Three such codes are available with unique timing indicated as A, B, and C code.

In a PMTC receiver, the received code must satisfy both the fundamental frequency and the coding as well to be detected.

To present multiple signal aspects, the timing between coded groups is varied in the same manner as dc coded track to provide 5 separate modulation rates for 6 possible signal aspects. Each modulation rate is detected by a solid state demodulator responsive only to that modulation rate. Consequently, only one modulation rate is sent at a time.

The unique coding signature results in a receiver sensitivity to only the transmitter to which it is paired. No known source of signal, either natural or man-made, puts out such timed audio bursts.

**System Security.** Fail-safe design practice is incorporated throughout the system. No single component failure will cause display of a less restrictive indication. Also no single component, which would result in further failures causing an unsafe condition, will fail without obvious safe malfunction.

While the system uses timed events, which could drift, the design is such that known failure modes of components will cause the the display of more restrictive indications. Also, guard bands are provided between acceptable timing limits of each code or modulation rate. If the timing of transmitter, receiver or demodulator should drift it would enter a guard band, resulting in a red signal, before moving far enough to display an improper aspect.

Complete decoupling is provided from spurious noise in the power supply. Voltage regulator check circuits are incorporated to prevent improper operation from either over or under voltage.

**Application.** The PMTC has two basic operating modes. It can be used for train detection as well as for signal aspect information or for aspect information only.

In the case of providing detection and aspect information, the PMTC is usually used without insulated joints and with loop or rail current coupler signal pickup. For signal aspect control only, the PMTC is used with dc track circuits to provide shunt detection and the modulation rate provides signal aspect information. Each method of operation has specific advantages.

## Eliminate wires

In either operating mode, the PMTC will eliminate all line wires associated with block signaling. Also, because multiple frequencies can be used, most of which can be simultaneously present on a track section, the system can be used in both directions simultaneously. This eliminates the need for turning traffic by other means.

Because of its burst mode operation, the PMTC can be used in a high noise environment. CW type noise is incapable of causing an unsafe display and noise immunity before receiver dropout is high. As a result, many installations have been made in locations where power lines have been built on or adjacent to the right of way. The system has also been used successfully on electrified roads.

The PMTC is compatible with audio overlays as well as the Motion Sensor and model 400 GCP. Being an audio circuit, signals can be coupled or suppressed by means of wide band or narrow band tuned shunts.

**PMTC Signal Control Without Insulated Joints.** In this operating mode the shunt detection, broken rail protection and signal aspect control are all performed by the PMTC. This eliminates the need for insulated joints except at head blocks (where a dc detector section is normally used). As many frequencies and three code signatures are available, combinations of which can be used without mutual interference. It is possible to cascade as many intermediates as desired. This can even be done on multiple track.

Current pickups, either loops or rail current couplers, define the track circuit cutoff to within as little as one foot; Consequently, signal system application can be the same as with insulated joints.

The receiver incorporates a threshold detector which prevents acceptance of a signal if it is below the present level. This provides positive dropout for a shunt and also enables the system to detect broken rails.

As the PMTC signal is basically an audio tone, it is attenuated by the inductive reactance of the steel rails. Consequently, unlike a dc track circuit, the rails appear to have considerable impedance. This results in a limitation to the maximum length track circuit possible.

When a broken rail occurs, the ballast resistance forms a leakage path to span the break. Consequently, when the rail impedance is high with respect to the ballast resistance, we can no longer detect a rail break. This phenomena is, of course, true with dc track circuits as well. This is reflected in the track circuit tables for determining maximum safe track circuit lengths. However, the limitation is much greater with audio track circuits.

In order to provide adequate dynamic range to handle normal ballast resistance changes from wet to dry, we must provide at least a 2:1, or 6 dB range, for receiver voltage variation. Consequently, with the 5.5 volt detector voltage threshold used in the PMTC, we must provide for operation over a 5.5 to 11 volt detector voltage range.

When a broken rail occurs, a computer analysis and actual tests

have shown that we observe this dB drop only to a maximum of 7000 ft. for frequencies up to 645 Hz and less for higher frequencies. This results in the need for repeaters in many signal blocks. These repeaters regenerate the PMTC signal and make possible the 10,000 to 20,000 foot blocks used in modern signal practice.

**PMTC with dc track circuits.** To overcome the limitation of the rail impedance with an audio track circuit, many PMTC installations recently have been made using dc track circuits for shunt detection and broken rail protection.

Referring to the track circuit tables for a center-fed dc track circuit and high dropaway/pickup ratio relays, 15,000 to 20,000 foot circuits are practical. The dc TR is used to break the PMTC link over its front contacts at both ends providing total occupancy information with a shunt entering from either end.

Freed from the 6 dB dynamic range limitation imposed by broken rail protection, the PMTC can operate to 12 to 18 dB dynamic range. This provides PMTC operation equal to that of the dc track circuit without repeaters.

**System Description.** The PMTC system used in either of these operating modes is a metal case containing transmitter, receiver, demodulator and shunt PC cards as required for each signal function. Input transformers and couplers are sealed units and are case or track mounted.

Complete equipment is available for adapting to various track configurations such as signal locations, repeaters, switch lock releases, overlap circuits and grade crossing starts. Also, several shunt couplers are provided depending both on PMTC operation and whether or not other audio signals are present.

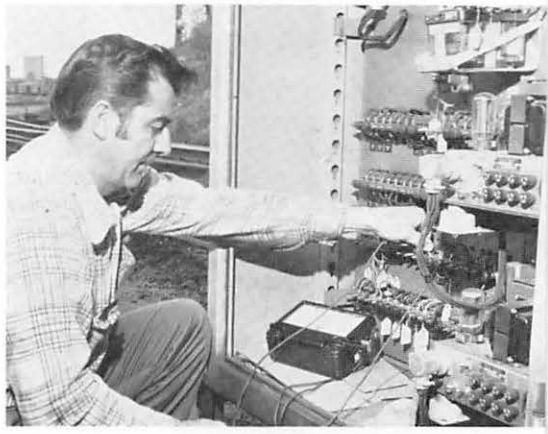
Power supply is a nominal 12 volts dc with current requirements of 1.0-2.0 amps depending on configuration. Drive is provided from each demodulator for a 12-volt line type (250 to 1000 ohms) signal relay.

A recent improvement has been to substitute front mounted AAR terminals to replace the rear mounted screw terminals.

Signalmen **L. D. Renchen** (left), **C. R. Bryant** and **Wayne Collins** (on pole) install line wire for signal circuits following the tornado that went through Xenia, Ohio last year. They are members of BofRS Local 82.

# PC signalmen restore circuits

Signalmen **J. F. Blackford** and **L. E. Reis** of Local 79 excavate cable for crossing signals in Xenia, Ohio.



Another Penn Central signalman **R. J. Massiniano** of Camden, NJ checks voltage for radar on the master retarder at Pavonia yard. He is a member of Local 25.

In another area, batteries that power crossing signals are checked by **F. L. Marchiano,** inspector communications & signals and a member of Local 18.

# News

## L&N to enlarge DeCoursey yard

A $1.5 million dollar construction program at DeCoursey, KY, near Cincinnati, will provide for the addition of eight new classification tracks to the southbound yard. The additional tracks will provide a full 32 classification tracks and will permit the speeding of freight car classification, particularly in returning empty coal hoppers to mines in eastern Kentucky. Work should be completed in the very near future.

## Santa Fe well along with retarder yard

Construction is proceeding on schedule at Barstow, CA, where Santa Fe is installing a $38 million dollar freight classification yard. The new yard is just west of their present facilities. It will be fully automated and controlled by digital process control computers and have a maximum handling capacity of 2,700 cars daily. The main classification yard will contain 48 tracks.

## Amtrak locomotives have cab signals

Seventy new diesel locomotives being operated by Amtrak have been equipped with cab signal and train control equipment furnished by the Union Switch & Signal Division of WABCO. These locomotives will be operated over the Penn Central, Richmond, Fredericksburg & Potomac, Illinois Central Gulf, and Union Pacific railroads.

## BofRS represents P&W technicians

The National Mediation Board has certified that the Brotherhood of Railroad Signalmen is designated and authorized to represent, for purposes of the Railway Labor Act, the craft or class of technicians employed by the Providence & Worcester Company. Nine employees are covered by this representation process.

## Crossing signal committee at work

BofRS-AAR committee to prepare standards for railroad-highway grade crossing warning devices met at BofRS headquarters in Mt. Prospect, IL. Shown here are (left to right): **P. H. Foley,** engineer, communications & signals, AAR; **R. W. Maddux,** signal inspector, T&P; **W. D. Best,** vice-president, BofRS; and **J. E. Hansen,** director of research, BofRS.

Others at the meeting included (left to right): **J. L. Weatherby,** engineer communications & Signals, MP; **L. V. Anderson,** assistant vice-president operations, MILW; **C. H. Dunn,** director signal engineering, BN; and **R. W. McKnight,** editor, The Signalman's Journal (who took these pictures, hence not shown).

## L&N works on new yard near Louisville, Ky.

Work is underway at Strawberry Yard near Louisville, KY by the Louisville & Nashville to construct a new automatic freight classification yard having 49 classification tracks. The equipment, furnished by the Union Switch & Signal Division of WABCO, includes electropneumatic car retarder and switch machines, automatic routing and retarder speed control, control and monitoring panels, dual digital computers for process control and various input and output data devices. The process control computers will be linked to dual management information computers furnished by the railroad. At the bowl end of the classification tracks, power control skate retarders will be used. Cab signals and automatic speed regulation for humping locomotives will be controlled by radio from the yardmaster's control console.

This new L&N yard is estimated to cost $24.5 million dollars and will have a classification capacity of 3,000 cars per day.

## Servo grants license on car identification

Servo Corp. of America, manufacturers of KarTrak Automatic Car Identification Systems, is now providing retroactive licensing of its

system to Computer Identics Corps. and its subsidiary ACI System Corp. which are now part of Pullman, Inc. The agreement calls for royalty payments to Servo by the licensees for their past and future manufacture, use, lease or sale of automatic car identification equipment covered by more than 70 U.S. and international patents and applications held by Servo. The agreement also includes royalty payments to Servo by the licensees for repair, maintenance, renewal and spare parts.

Servo President Henry Blackstone said, "We are pleased that this agreement has been reached. For Servo, it achieves two significant objectives: it provides a source of income, and also recognizes our technological leadership in the highly complex field of automatic car identification systems."

## Retarders upgraded at two L&N yards

Louisville & Nashville has installed 80 operable weight responsive car retarders at the leaving end of bowl tracks at retarder classification yards in Atlanta, GA and Birmingham, AL. The new model 50B retarders are electrically controlled and hydraulically operated. When released these retarders allow cars to be pulled through them without creating retarder squeal or other objectionable noises. Thus, use of the new retarders provides an additional environmental benefit.

## SCL works on yard at Waycross, Ga.

Seaboard Coast Line is well underway with construction of a new automatic car retarder yard at Waycross, GA. The 30 million dollar yard will have 64 classification tracks and be capable of handling 6,000 freight cars a day. Equipment for this yard has been ordered from the Union Switch & Signal Division of WABCO. Dual digital computers for process control will be linked to the roads operating information system in Jacksonville. Cathode-ray-tube input devices will be strategically located about the yard to feed the process control computers. Model 67 car retarders will be controlled by the VELAC VR-3 digital computer control system. Other equipment at the yard will include DA-10 fast acting switch machines, Hi-frequency track circuits for positive shunting, presence detectors for long car switch locking protection, weight proportional skate retarders and WD-30 wheel detectors for car tracking. Model LSR-100 hump locomotive speed control will be installed on four hump locomotives to provide automatic speed control from the humpmaster's control console in 15-step instruments and will operate via a radio system. Additionally control consoles will be supplied for the receiving yardmaster and the pullback and forwarding yardmaster.

## Information wanted for signal history

A signal historian is starting work on a comprehensive history of railroad signals in the United States and Canada. He will appreciate any information, pictures, drawings, or printed matter, especially early, rare, or unusual material that is not found in available periodicals or reference libraries. Early installations, late survivals, personal memories, and little-known types of equipment are of particular interest.

The scope of this work includes signals for all forms of rail transportation from long-haul main lines to local trolleys. It will include foreign developments, primarily in England, to the extent that they were the original source of American practice, and perhaps a few instances of foreign applications of American developments. It will touch on communications, operating rules, train orders, and other aspects of railroading only as much as is needed to clarify the place of signals in railroad operation. Write Henry B. Brainerd, 10 Upland Road, Wellesley, MA 02181.

## Signal Maintainers

To maintain, trouble shoot and field repair ground signal equipment in the automatic train control system. Progressively responsible experience required. Apply to Washington Metropolitan Area Transit Authority, Attention: Personnel Office, 600 5th St., N.W., Washington, DC 20001. Phone: 202-637-1070. An Equal Opportunity Employer.

## Computerized signaling featured at meeting

Penn Central's computerized control of over 100 miles of heavy traffic mainline territory in the Pittsburgh area will be a highlight of the Eastern Sectional meeting of the Communication & Signal Section, AAR, on May 29 at the Marriott Inn in Pittsburgh, PA. Other features include track circuits for electrified lines, employee recruiting and training, and application of motion detectors.

Luncheon reservations at $6.50 each should be made with W. J. Young, Engineer C&S, Bessemer & Lake Erie, Greenville, PA 16125. Room reservations can be made with the Marriott Inn, 101 Marriott Dr., Pittsburgh, PA 15205.

**John C. Nesselrodt,** signal maintainer, Chicago & Eastern Illinois at Villa Grove, IL has compiled a 22-year perfect safety record. Brother Nesselrodt has been active in BofRS affairs, and is recording and financial secretary of Local 174.

# RS&I

## Subpart E—Automatic Trainstop, Train Control and Cab Signal Systems Standards

**Sec. 236.501 Forestalling device and speed control.**

(a) An automatic trainstop system may include a device by means of which the automatic application of the brakes can be forestalled.

(b) Automatic train control system shall include one or more of the following features:

(1) Low-speed restriction requiring the train to proceed under slow speed after it has either been stopped by an automatic application of the brakes, or under control of the engineman, its speed has been reduced to slow speed, until the apparatus is automatically restored to normal because the condition which caused the restriction no longer affects the movement of the train.

(2) Medium-speed restriction, requiring the train to proceed under medium speed after passing a signal displaying an approach aspect or when approaching a signal requiring a stop or a stop indication point, in order to prevent an automatic application of the brakes.

Note: Relief from the requirements of subparagraphs (1) and (2) of this paragraph will be granted, insofar as speed limits by definitions of Slow and Medium speeds are concerned, upon an adequate showing by an individual carrier where automatic train control systems now in service enforce speed restrictions higher than those required by definitions in Sections 236.700 to 236.838 inclusive.

(3) Maximum-speed restriction, effecting an automatic brake application whenever the predetermined maximum speed limit is exceeded.

**Sec. 236.502 Automatic brake application, initiation by restrictive block conditions stopping distance in advance.**

An automatic trainstop or train control system shall operate to initiate an automatic brake application at least stopping distance from the entrance to a block, wherein any condition described in Section 236.205 obtains, and at each main track signal requiring a reduction in speed.

**Sec. 236.503 Automatic brake application; initiation when predetermined rate of speed exceeded.**

An automatic train control system shall operate to initiate an automatic brake application when the speed of the train exceeds the predetermined rate as required by the setting of the speed control mechanism.

**Sec. 236.504 Operation interconnected with automatic block-signal system.**

An automatic trainstop or train control system shall operate in connection with an automatic block-signal system and shall be so interconnected with the signal system as to perform its intended function in event of failure of the engineman to obey a main track signal requiring a reduction in speed.

**Sec. 236.505 Proper operative relation between parts along roadway and parts on locomotive.**

Proper operative relation between the parts along the roadway and the parts on the locomotive shall obtain under all conditions of speed, weather, wear, oscillation, and shock.

**Sec. 236.506 Release of brakes after automatic application.**

The automatic trainstop or train control apparatus shall prevent release of the brakes after automatic application until a reset device has been operated, or the speed of the train has been reduced to a predetermined rate, or the condition that caused the brake application no longer affects the movement of the train. If reset device is used it shall be arranged so that the brakes cannot be released until the train has been stopped, or it shall be located so that it cannot be operated by engineman without leaving his accustomed position in the cab.

**To Be Continued**


Why for a

***Servo is the world's leading producer of electronic hot box detector systems.***

We're not experts in every phase of railroad safety — but as the industry's pioneer designer and producer of electronic hot box detection systems, we can claim a high level of successful experience in working on the problems of bearing failures, axle burn-offs and derailments associated with undetected hot boxes.

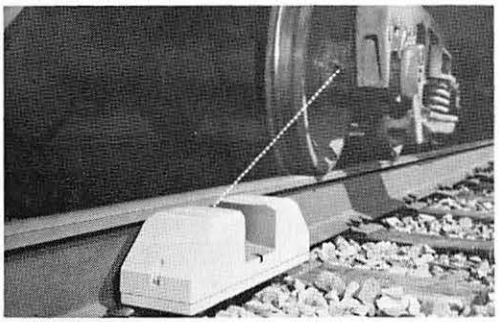
Since 1957, more than 1,800 SERVOSAFE Hot Box Detective Systems have been put into service, and have compiled an unequaled record of safety improvement, more efficient preventive maintenance procedures and cost reduction.

Hot box detectors available from Servo offer the widest flexibility in choice of system configuration, features and functional options, including: rail-mounted or ballast-mounted scanner; a complete selection of ancillary and test equipment; solid-state electronic signal processing. Several modes of data read-out are also available — automatic digital read-out at trackside or remote location; pen-paper recorder chart for visual interpretation; FM carrier data transmission over unlimited distances.

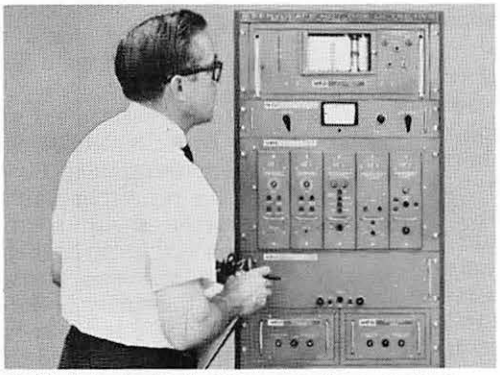
With our broad range of products and world-traveling network of field engineers, we can readily "customize" the design, manufacture, installation and operation of a SERVOSAFE System to best meet the particular requirements of your railroad.

You are invited to contact us for complete descriptive literature, or to arrange a field engineering site survey and application review — without obligation, of course.

# spend the capital SERVOSAFE® system?

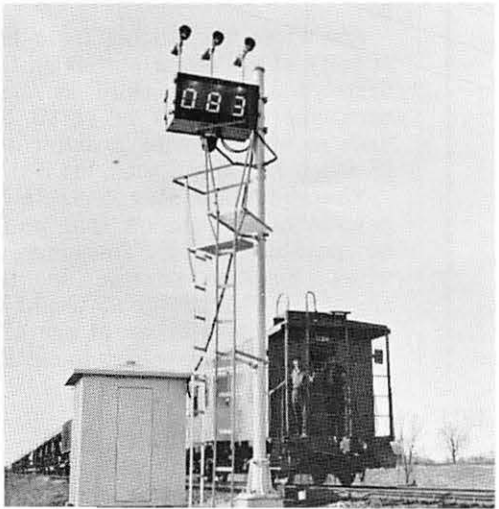


*Rail-mounted scanner "looks" at and measures the heat radiated by passing journal boxes.*



*Solid state electronic data processing equipment, with permanent record chart recorder.*

*Trackside display board gives digital read-out of hot box location.*




**BECAUSE SERVOSAFE CAN REDUCE MAINTENANCE COSTS.** Journal box and wheel set maintenance represent substantial costs each year. Part of these costs is due to normal bearing wear as cars age. Much higher costs, however, are involved when equipment is needlessly damaged by continued operation after lubrication has failed—causing major salvage jobs or replacement of wheel sets.

Where SERVOSAFE Systems are used for early detection, experience has shown that only 1 out of 10 hot boxes required a wheel set replacement. With other methods, as many as 9 out of 10 that came in for repair required new wheel sets.

**BECAUSE SERVOSAFE CAN REDUCE LABOR COSTS.** With SERVOSAFE providing an automatic and more precise method of inspecting journal boxes, railroads have been able to significantly reduce the number of personnel formerly required for manual and visual inspection of wheel journal boxes.

**BECAUSE SERVOSAFE CAN MORE THAN PAY FOR ITSELF.** Obviously, the single most important reason to make a capital investment in SERVOSAFE is to decrease the fearsome prospect of one of the greatest capital losses a railroad faces: a derailment caused by a bearing failure. The total cost of a derailment cannot be determined in advance, but it is not unrealistic to estimate that one serious derailment could cost a railroad more than 20 times the investment in a SERVOSAFE System. That's why most railroads agree that SERVOSAFE protection isn't costly—*lack of it is!*

servo

**SERVO CORPORATION OF AMERICA**

Hicksville, New York 11802
Phone 516-938-9700 • Cable SERVOGRAM
Lausanne, Switzerland
Phone (021) 29-98-73 • Telex 24 420 SERVO CH

***Serving Safety Through Science***

MEMBER RPI

# Personal Aids and News

## Wives annuities reported by R. T. Bates

The Railroad Retirement Act provides annuities for the wives or dependent husbands of retired employees. These annuities are paid in addition to regular and supplemental annuities on the basis of a retired employee's railroad service. Recent legislation, effective January 1, 1975, liberalized the age requirements for railroad retirement wives' annuities.

The following questions and answers illustrate the conditions under which wives' annuities are payable.

**(1) How much can a spouse annuity be?**

A wife's annuity is one-half of her husband's regular annuity, but no more than $247 in 1975. The average spouse annuity awarded in January 1975 was almost $150 per month.

**(2) My husband retired at age 60 with 30 years of service in July, 1974. When am I eligible for a wife's annuity?**

Under new railroad retirement laws effective in 1975, a full spouse annuity is payable at age 60 to the wife of a retired employee age 60 or older with 30 years of service, if the employee's regular annuity began after June 30, 1974. If the wife of such an employee has a minor or disabled child in her care, she is eligible at any age. Under previous law, every employee had to be age 65 before his wife could be eligible for a spouse annuity, and a wife had to be at least age 62 to receive a reduced spouse annuity unless she had a child in her care.

**(3) My husband is planning to retire at age 62 with 10 years of railroad service in 1975. Am I, as his wife, affected by the new railroad retirement laws?**

Yes. For an employee age 62 to 64 with less than 30 years of service, whose regular annuity begins after December 31, 1974, the new law lowers the age required of such an employee for his wife to be eligible for a spouse annuity. In 1975 the employee need be only age 62 for his wife to receive a reduced annuity at age 62 or a full annuity at age 65 or at any age if she has a minor disabled child.

**(4) My husband retired a few years ago. Is there any change in eligibility requirements for me?**

The eligibility requirements for wives of 30-year employees who retired before July 1, 1974, and for the wives of 10 to 29-year employees retired before 1975 were not changed. Your husband must still be at least 65 years old and you must be at least 62 to be eligible for a reduced annuity, or be age 65, or have a minor or disabled child in your care, to be eligible for a full annuity.

**(5) My husband and I are both career railroad workers. Can I qualify for a railroad retirement spouse annuity based on my husband's railroad work as well as an annuity based on my own railroad work?**

A female railroad worker may qualify for a railroad retirement spouse's annuity as well as an employee annuity if either she or her husband had some railroad service prior to 1975.

**(6) When I retire in 1976, my wife will be eligible for a social security benefit based on her own earnings as well as a railroad retirement wife's annuity based on my earnings. Will she be paid both benefits?**

Both her railroad retirement and social security benefits will be paid by the Railroad Retirement Board and her railroad retirement annuity may be reduced up to the amount of the social security benefit. However, if she was already insured for social security benefits on December 31, 1974 and you had 10 years of railroad service on that date the reduction is much smaller.

**(7) How much is a wife's annuity reduced if she chooses to begin receiving it at age 62 instead of age 65?**

For wives not eligible for a full annuity at age 60, or earlier on the basis of having a child in their care, the reduction is 1/180 for each month the wife is under age 65 when her annuity begins.

The reduction at age 62 is 20 percent of the amount that would be payable at 65. Therefore, a wife's annuity payable in the amount of $160 at age 65 would be $128 if payment began at age 62.

**(8) Is a wife required to be liv-**

---

*For United States residents only:*

## Moving? Let us know!

Please send your new address to:
**The Signalman's Journal, 601 W. Golf Rd., Mt. Prospect, IL 60056**

**Name** _____

**Street or Box No.** _____ **Apt. No.** _____

**City** _____ **State** _____ **Zip** _____

**Lodge No.** _____ **Certificate No.** _____

**ing with her husband in order to be eligible?**

As of the day she files her application for her annuity, she must be living with her husband, or receiving regular contributions from him for her support, or her husband must be under court order to provide her support.

**(9) Must a couple be married for a certain period of time before a wife's annuity can begin?**

There is a one year marriage requirement unless the wife is the natural mother of her husband's child, or, she was eligible for a widow's, parent's or disabled child's annuity under the Railroad Retirement Act in the month preceding the month of her marriage to the employee.

**(10) Are there any restrictions on the receipt of a wife's annuity?**

Before her annuity begins, a wife must stop all work for pay (other than self-employment) and give up her rights to return to such work.

After she begins receiving her annuity, payment is stopped for any month in which her husband's regular annuity is not payable. Also, a wife's annuity is not payable for any month in which a wife works for a covered employer (railroad or rail union) or for the person or company for which she last worked before her annuity began. If she also receives social security benefits, excess earnings deductions may be assessed if she earns over $2,520 in 1975.

**(11) When would the payment of a wife's annuity end?**

A wife's entitlement would end with the death of her husband; then a widow's benefit would normally be payable by either the Board or the Social Security Administration on the basis of the deceased husband's credits with both

*(Please turn to page 20)*

# *Open enrollment forms for GA-23111*

GA-23111 *This Completed Form Together With The Required Payment Is To Be Sent To:*

The Travelers Insurance Company, P.O. Box 3002
GROUP DEPARTMENT–RAILROAD DIV.–HARTFORD, CONN. 06101

| NAME OF EMPLOYEE *(Please Print)* Last First Middle Initial | SOCIAL SECURITY NO. | DATE OF BIRTH EMPLOYEE Mo. Day Yr. | DATE OF BIRTH SPOUSE Mo. Day Yr. | EMPLOYEE NO. | DATE LAST WORKED Mo. Day Yr. |
|---|---|---|---|---|---|
| ADDRESS OF EMPLOYEE No. and Street City State Zip | | NAME OF EMPLOYER (RAILROAD) | | | |
| REPRESENTED BY WHAT UNION? | DEPARTMENT | DIVISION | LOCATION | DATE OF EMPLOYMENT | |

Before completing this section see Pages 9-11.

**REASON FOR LEAVING ACTIVE EMPLOYMENT** ☐ RETIRED ☐ FURLOUGHED ☐ DISABLED ☐ LEAVE OF ABSENCE ☐ PREGNANCY ☐ SUSPENDED ☐ TERMINATED

Certification by Railroad For Retired Employees: Where this form is to be used by the Employing Railroad as part of the terminal interview or is to be forwarded with the terminal letter, the Employing Railroad should complete the Certification Information indicated below. If Certification is not furnished below, The Travelers will send the standard Certification Form to the Employing Railroad.

Date Qualifying Employee last rendered compensated service or received vacation pay _____ _____ Authorized Signature – Railroad

If an Enrollment Card is being submitted for a student child, incapacitated child or parent(s) it is necessary that such person(s) full name and home address be shown below. If this information is not completed, the enrollment card cannot be accepted.

☐ STUDENT CHILD ☐ INCAPACITATED CHILD ☐ 1 PARENT ☐ 2 PARENTS DATE(S) OF BIRTH _____

Name and address of student child, incapacitated child or parent(s) for whom enrollment is being made

GA-23111

| PERSON(S) TO BE INSURED | REQUIRED MONTHLY PAYMENT | | | |
|---|---|---|---|---|
| | Persons Not Eligible Under Medicare | | | PLAN D Each Person Eligible Under Medicare |
| | PLAN A | PLAN B | PLAN C | |
| Employee only | ☐ $ 6.65 | ☐ $17.19 | ☐ $36.00 | ☐ $12.00 |
| Dependents only or Widow and/or Children | ☐ $ 7.76 | ☐ $17.19 | ☐ $36.00 | ☐ $12.00 |
| Employee and Dependents | ☐ $14.41 | ☐ $34.38 | ☐ $72.00 | |
| Each Parent – Eligible under Medicare | | | | ☐ $12.50 |
| Student Child (age 19 to age 25) | | | ☐ $3.00 | |
| Incapacitated Child (age 19 and over) | | | ☐ $5.00 | ☐ $12.00 |

I understand that the benefits which I am subscribing to are those indicated by the required monthly payment checked hereon for the plan as described in the folder (Form GI-47635) furnished to me in connection with Group Policy GA-23111. I also understand that I will be notified directly by The Travelers Insurance Company of my acceptance and billed for my next payment.

_____ Signature of Employee _____ Date

## PA&N Cont'd

systems. A wife's annuity also ends with divorce or, of course, with the death of the wife herself.

If a wife's annuity is being paid to a woman on the basis of her caring for a minor or disabled child and the child attains age 18 or recovers from his disability, her annuity would cease to be payable until she reaches retirement age.

**(12) Under what circumstances can the husband of a retired female railroad employee qualify for a similar spouse benefit?**

The husband would have to be dependent on his wife for more than half of his support at the time her employee annuity begins.

## Sherman Hill story told in fascinating book

For all those interested in western history railroading and just good writing, the story of how the Union Pacific was constructed over the Rockies west of Cheyenne, is told with interesting text and many high quality photographs in the book titled "Sherman Hill." Authors James L. Ehernberger and Francis G. Gschwind give a detailed account of the complete saga of the legendary Sherman Hill from the days of the tiny woodburners to the modern era of high horsepower diesel electrical locomotives. Included are details of the multi-tracked operations over the hill, the terminals at Cheyenne and Laramie, the Dale Creek bridges, Sherman and Hermosa Tunnel, the Ames Monument, and many other facets of railroading over this summit.

Sherman Hill is directly west of Cheyenne. Here the Union Pacific has the toughest mainline grades and the busiest stretch of traffic on the entire system. All through traffic moving over the Union Pacific in either direction between the Missouri River and the Pacific Coast travels over this 56-mile segment of line which has maximum grades of 1.55%.

The 128-page book, 8½" x 11" is printed on heavy white stock, which provides excellent reproductions of photographs, detailed maps, and old timetables. Copies may be obtained at book stores and by ordering direct from E & G Publications, P. O. Box 101, Callaway, NE 68825. Price: $10.95.

## Let's get better pictures in TSJ

Comment has been made that some of the photographs appearing in *The Signalman's Journal* are not crisp and clear. Also, some of the individuals are not as recognizable as they could or should be. To help improve the situation we request that you send black and white photographs along with the news items concerning activities. If clear black and white pictures are not available, please try to send good clear colored photographs in which the faces of individuals are well illuminated and stand out in a very good contrast to their surroundings. For example, please do not photograph an individual standing in front of a venetian blind or against a wall with a figured wallpaper or striking design.

When taking pictures of large groups of individuals it may be more desirable to take them in smaller groups. For example, when taking a picture of eight people break them up into two groups of four or in a group of five and three. In this manner each one will be more recognizable. So the quality of the pictures in *The Signalman's Journal* depends upon all of us who take pictures for the magazine. Let's work together to improve them.

# How to save your automobile

## By Sidney Margolius

As prices of both new and used cars have leaped, owners are spending more to keep their present vehicles operating. Dealers and other service shops report that many people might have traded a few years ago if repairs cost more than $300-$400. Now they are more inclined to pay for such major jobs as transmission repairs and engine overhauls, and sometimes even new engines.

In an effort to save on high gasoline prices (and they're going even higher with forthcoming new taxes), car owners also are getting more tuneups, according to industry reports.

You can do a great deal to conserve your car—both engine and body—by the way you handle and take care of it.

Here are simple ways to save your car:

**Use your engine to save brake linings:** Anticipate your slow-downs. When you see you must slow down, take your foot off the accelerator slowly and let the engine's compression do some of the job. Always keep the master brake cylinder filled with heavy-duty brake fluid. Avoid running down long hills holding down your brake pedal. Shift to a lower gear and let the engine holdback help you retard downhill speed.

**Test brake pedal action:** Cars with power brakes must have the engine running. Excess pedal travel indicates worn linings or need for adjustment. Hold the brake pedal down with moderate pressure for 60 seconds to check for gradual "loss of pedal" caused by leaks.

**Watch tailpipe smoke:** Blue smoke means too much oil is getting in the combustion chambers. A lot of blue smoke is a warning that piston rings may need replacing. Black smoke indicates too much gas in the air-fuel mixture. Your carburetor may need an adjustment. White smoke is mostly water vapor; especially noticeable on cold days, but is of no concern.

**Check shock absorbers:** Loss of shock dampening power affects steering control and braking, also prematurely wears out tires, injures front end, transmission and other components. A bounce test will tell whether your car needs new shocks (there's one at each wheel). A properly-operated shock absorber will level out after one complete down and up oscillation. Any further movement indicates loss of holding power.

Some authorities say that a more conclusive test is to drive the car on a smooth road at about ten mph while tapping the brake pedal repeatedly. If this sets up a rocking motion with front end dipping and rising alternately, shocks may need replacing.

**Check wheel alignment and balance:** An out-of-line wheel can increase tire wear by as much as 50%. An unbalanced wheel causes uneven tread wear. Have alignment and balance checked twice a year.

Also keep an eye on your tires. Excess wear on one edge or erratic wear may indicate that the wheels are out of line. (Incidentally, excessive wear in the center indicates the tire has had too much pressure too long. Excessive wear on both shoulders indicates chron-

ic under-inflation.

**Don't race your car engine to warm:** This doesn't help and increases engine wear. Slow driving for the first few minutes will properly warm up the engine. Also avoid shutting off the engine immediately after long high-speed driving.

**Don't put cold water into boiling radiator or hot water into a very cold radiator:** This could crack the engine block.

**Check radiator water level:** Check only with the radiator cold. Don't overfill. If the level is noticeably low, look for leaks. While you may not need to drain the antifreeze in the summer, especially if you haven't driven the car heavily, do add rust inhibitor.

**Check hoses, belts:** This is one of the most important inspections you can do. A ruptured hose can spill out your antifreeze. A loose or worn belt can reduce battery efficiency, affect engine performance or even sideline your car. Most belts look all right on top, even when in poor condition. But cracks on the underside can cause belt failure. Also check tension. It's proper when belts can be pushed down one-fourth of an inch at midpoint.

Many hose defects can be spotted by looking, but also check for softening or hardening by squeezing the hose.

**Keep battery clean:** You can wash away corrosion with a solution of baking soda and water. The baking soda neutralizes acid spillovers. Then wipe the terminals with petroleum jelly. Also check the battery water level, especially in warm weather.

**Adjust wipers:** If wipers streak, the tension may need adjustment or the blades may have stiffened. To restore resiliency rub the blades with a sponge or soft cloth dipped in ammonia.

**Wash off road salt:** The body structure as well as the finish can be eaten away by the chemicals used to clear roads.

**Keep chrome clean:** This avoids pitting which lets in water which can rust the metal under the chrome.

**Fix scratches in the finish:** Scratches expose metal which may then rust. Until scratches can be refinished, a dab of touch-up paint or strip of cellulose tape can help prevent rust. Clear nail polish can be used to cover scratches in chrome.

**Clean seats:** Use a baking soda solution for vinyl seats, rinse and dry. This removes grease and soil without scratching. For cloth upholstery and floor rugs, use a mild soapy solution with a little tint dye of the same color.

Owners are not only keeping their cars longer but most recently some also are avoiding needed maintenance. They are using such tactics as patching worn mufflers instead of replacing them and pushing their tires longer. Service garages report that they see more cars in their shops with balding tires. More owners are patching tires, too, and the industry itself reports tire sales are down.

The problem, of course, is that price tags on tires jumped a sizable 15% this year. But with warm weather and the driving season ahead, the dangers of balding tires are multiplied. Heat is the enemy of tires. Most blowouts occur when tires are down to the last 10% of tread.

Over- and under-inflation increase probabilities of sidewall failure and also reduce tread life. Under-inflation is especially harmful. A pound or two of over-inflation prolongs tire life, but too much makes a harsh ride.

**Look for wear.** A look at the way your tires are wearing may indicate whether they've been kept properly inflated. Excessive tread wear on both shoulders indicates chronic under-inflation. Excessive wear in the center indicates the tire has had too much air pressure for too long a time.

Excessive wear on one edge or erratic wear may indicate that the wheels are out of line, or out of balance. Worn shock absorbers also cause irregular wear.

You can get a Tire Safety and Mileage Kit for $2. It includes a pressure gauge, tread gauge, extra set of valve caps and a booklet on tire selection and care. You can order it from Tire Safety, Box 726, New York, NY 10010.

One reason for checking tires yourself is that air-tower pressure gauges at service stations are not always dependable. Surveys have shown them often off several pounds. You should check pressure

*(Please turn to page 22)*

# Open enrollment form for Medicare

Name of Medicare Insured–Employee
FI | MI | LAST

Health Insurance Claim Number

Employee–Social Security Number/Railroad Retirement Board Number

AUTHORIZATION: I authorize The Travelers Insurance Company to release to The Travelers Insurance Company any information which is required to act on a claim under my complementary health insurance policy and permit a photostatic or other facsimile reproduction of this authorization to be used in place of the original. This authorization is in effect until notice of revocation is received by The Travelers Insurance Company.

Signature of Medicare Insured (or Authorized Representative)–Employee

Date Signed

Name of Medicare Insured–Spouse
FI | MI | LAST

Health Insurance Claim Number

AUTHORIZATION: I authorize The Travelers Insurance Company to release to The Travelers Insurance Company any information which is required to act on a claim under my complementary health insurance policy and permit a photostatic or other facsimile reproduction of this authorization to be used in place of the original. This authorization is in effect until notice of revocation is received by The Travelers Insurance Company.

Signature of Medicare Insured (or Authorized Representative)–Spouse

Date Signed

The signed Authorization will allow us to process any future benefits for which you may be eligible under a Railroad Group Health Plan insured by The Travelers, using information which you and your physician supply in order for you to obtain Medicare Benefits.

This form should be completed carefully for each person insured under your Railroad Group Health Plan who is also insured under the Medicare Program.

PRINTED IN U.S.A.

at least once a month and when tires are cool. Check your owner's manual for the recommended inflation.

The kit includes a tread gauge but you also can check remaining tread by inserting an upside-down penny into a tread. If you can see the top of Lincoln's head, the tread is dangerously low.

You also can look for the "tread wear indicators." These show up as solid bands across the tread surface when the tread is worn down.

When you repair tires don't depend on plugs inserted from the outside or on aerosol sealants for more than 100 miles and then only at moderate speeds. Permanent vulcanized repairs applied from inside the tire should be made as soon as possible, the Rubber Manufacturers Assn. warns.

In buying replacement tires, it's usually wisest, and in some cases imperative, to buy the same type and size unless you are replacing all four tires. Even then, you should follow the manufacturer's recommendation, especially if you are planning to buy a larger size than the original equipment for additional load capacity. If you are considering buying one of the late-model wider tires, such as the "70" series, make sure your wheel wells provide enough clearance so the tires won't rub against the car body.

There are three main types of tires:

**Bias ply,** which are the traditional tires with diagonal cords. They provide a relatively comfortable ride, and are less expensive but usually less durable.

**Belted bias-ply** tires have additional plies or belts of, usually, fiberglas or steel cord under the tread which adds puncture resistance. These tires provide a somewhat harder ride but grip the road surface better, and usually last longer than the bias-ply, as well as providing more puncture resistance.

**Radial tires** have the cords running straight across the tires. They wear longest, grip the road best, corner with least lurching, run coolest, and save gasoline. They are usually most expensive. Radial tires must be used only in sets of four.

If you drive mostly between home and work, or on short trips around town, and don't have to worry about heat build-up because of long-distance driving on turnpikes, bias-ply tires with a medium to heavy tread are adequate, the National Bureau of Standards has said. But if you do much long-distance driving and plan to keep your car some time, the longer wear of belted bias-ply and radial tires usually more than compensates for their additional cost.

## Retirement board issues service statements

The U.S. Railroad Retirement Board has completed the annual statement of railroad service—Certificate of Service Months and Compensation, form BA-6—and is mailing them to railroads and other covered employers for distribution to employees. These annual statements provide an employee with a record of his railroad service and compensation in 1974, as well as his cumulative railroad credits after 1936. The statements are also used by employees when they apply for certain benefits with the Board.

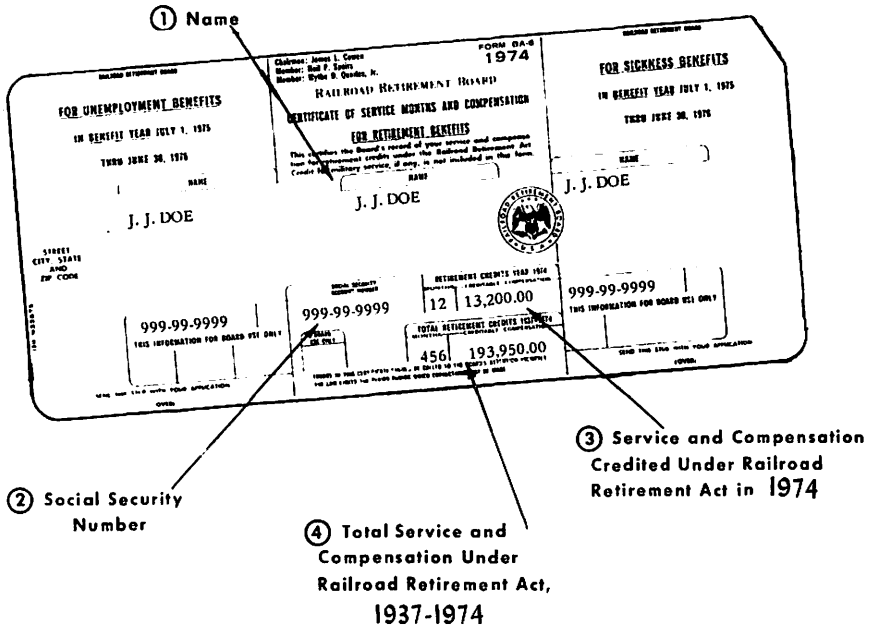
Most employees will receive their forms by June 1. They will go primarily to employees who qualify for unemployment and sickness benefits in the benefit year beginning July 1, 1975, on the basis of their 1974 employment. Employees who worked in 1974, but did not have sufficient earnings to qualify for unemployment and sickness benefits will also be sent a BA-6 form if they had service in each month in 1974 or if they worked for a local lodge or division of a national railway labor organization. Any employee who worked for a railroad in 1974 who does not receive a form by June 1 can write to the Board and request one.

Each employee should check to see whether his own record of service and creditable compensation agrees with the Board's figures shown on the BA-6. Important figures to be checked are on the diagram. If any of the information shown on the BA-6 is not correct, this fact should be reported in a letter to the Board as soon as possible. In checking the spelling of the name, the employee should keep in mind that the form contains only the first 10 letters of the last name.

All letters concerning BA-6 forms should be addressed to the Director of Data Processing and Accounts, U.S. Railroad Retirement Board, 844 Rush Street, Chicago, IL 60611. The employee should include his Social Security account number in the letter, otherwise no action can be taken by the Board.

The BA-6 form has detachable sections at each end. The section on the right side is used when an employee applies for sickness benefits, and the one on the left side is for unemployment benefits. The reverse sides of the sections explain the best way to apply for these benefits.

The BA-6 forms also include a reminder that employees who perform railroad work after their supplemental annuity closing date may



permanently lose their eligibility for a railroad retirement supplemental annuity. For the great majority, the closing date is the last day of the month following the month in which the employee attains age 65. The Board suggests that employees age 63 or older contact the nearest Board office for help in establishing proof of their age. This will insure them against forfeiting their eligibility through miscalculation of their age. Establishing the correct date of birth is important for Medicare enrollment.

### Are you interested in the Monon?

If you have an interest in the Monon Railroad and would like to help in the formation of a historical and technical society for the Monon Railroad you can now write to Dennis J. Wozniczka, 15 Chestnut Avenue, Clarendon Hills, IL 60514, who is interested in starting such an organization. The purpose is to unite Monon fans, share information and photographs of Monon Railroad's historical and featural significance. He hopes to be able to start a newsletter.

# Local Lodge News

### Local 16 discusses signal training

At the January 11, 1975 meeting of Seaboard Coast Line Lodge No. 16 at Jacksonville, FL, General Chairman **George G. Gross** reported on progress being made in setting up a new training agreement with the carrier. The training program will consist of four 130-day periods with a minimum of ten 8-hour days of classroom instruction. This is for new employees. Also, new men must pass the examination for the training program or they will forfeit their seniority and service. When an employee completes the course he will be required to bid on all permanent positions on a bulletin of the Signalmen's classification.

Employees with less than four years service will be required to enter the training program and in order for them to get into a higher classification must first complete this signal training program. If an employee with less than four years service fails to pass the course they will be retained in their present seniority classification.

Employees with more than four years of service may participate in the training program with these requirements: all present employees who bid in a higher classification or those assigned through bulletin to a maintenance position for the first time will be required to pass an examination on the training program material. Men will be given a complete set of training material when they bid in higher positions. Employees who wish to go through the training program may do so and will be enrolled on the basis of their request.

The railroad will designate and pay for transportation to and from the school for each classroom period and will pay the necessary and actual meal expenses when traveling to and from school. The carrier will pay for meals and lodging while an employee is attending the school and they will provide lodging and meals in accordance with the current agreement during weekends and if the employee is not in class session, and, of course, transportation will be provided between the lodging facilities and the school site itself.

This January meeting was attended by five officers and 24 members. The Chief Signalman, **J. C. Baldwin**, gave the Obligation to new Brothers **John Arnold, Danny Hutchinson, Donald Lloyd** and **Billie Lee.**

### Local 78 honors retiring members

Rock Island Local 78 met October 26, 1974 at Herington, KS to honor Brothers **K. C. Kraus** and **L. C. Zinsmeister** upon their retirement. A billfold and money was presented to Brother Kraus and a similar gift was sent to Brother Zinsmeister who was unable to attend. Brother Kraus was signal maintainer at McFarland, KS, and Brother Zinsmeister was a signal testman at Trenton, MO.

Brother **G. G. Ruhl** has been elected local chairman succeeding **E. L. Rollings** who was moved to Little Rock, AR for a signal test job there. Brother **B. L. Daniels** was elected trustee succeeding Brother Kraus.

Brother **G. A. Smith** is back at work and bidding in a job at Silvis, IL.

A cordial welcome was extended to the new general chairman Brother **Henry S. Gerth** of Madison, WI, who is also general chairman of the Chicago & North Western.

### Cortright honored on retirement

**John D. Cortright,** signal inspector on the Penn Central at Jackson, MI, was honored recently upon his retirement with a banquet at the Moose Lodge in Jackson. Brother Cortright is a member of Local 212. He began his signal career in 1939 as a helper in a signal gang on the old New York Central, Lines West. He advanced through various positions and at one time was an assistant supervisor of signals. In later years he held a signal inspector's position. Over 85 persons attended his retirement dinner.

### Local 65 honors retiring member

**Bill Wells** has taken advantage of the new system of retiring after 30 years of service when 60 years of age. Many members and their wives were in attendance as well as close friends. Brother Wells held the position of signal maintainer and relay testman at Baltimore. He and his wife are wished the very best and good fishing days ahead, reports **James T. Decker, Jr.,** recording and financial secretary of Tuxedo Local No. 65, Penn Central, which was formerly the Baltimore Division of the Pennsylvania.

**C. H. Heinly** of York, PA also retired in September 1974.

***SUPPORT SIGNALMEN'S POLITICAL LEAGUE***

# News About Members

MILWAUKEE ROAD: **Arthur Ray,** signal maintainer, Excelsior Springs, MO, retired August, 1974. Brother Ray is a member of Lodge No. 219.

SOUTHERN PACIFIC: **B. L. Dickerson,** general ctc maintainer on the Oregon Division and a member of Sacramento Local No. 179, has retired. **J. A. Buie,** signal maintainer, Tucson Division, has retired. Brother Buie is a member of El Paso Local No. 182. **R. E. Hallet,** signal maintainer on the Western Division, and a member of Local No. 92, has retired. **E. F. Sturrock,** signal repairman at the Houston Division Repair Shop, has retired. **H. M. Irwin,** signal foreman on the San Antonio Division, has retired. Both brothers are members of the Gulf Coast Local No. 99.

UNION PACIFIC: **M. B. Corso,** interlocking repairman at Cheyenne, WY, has retired after 46 years of service. Brother Corso is a member of Rock Springs Local No. 8. **W. L. Hieb,** of Oregon City, OR, an interlocking repairman, has retired after 35 years of service. Brother Hieb is a member of Portland Local No. 155. **J. F. Prater,** signalman, of Pocatello, ID, has retired after 26 years of service. **J. Wiseman,** signalman at Pocatello, ID, has retired after 46 years of service with the UP. Brothers Prater and Wiseman are members of American Local No. 111.

NORFOLK & WESTERN: **Lester C. Belknap,** signal helper at Sherrodsville, OH and **Ray T. Smith,** lead signalman at Fostoria, OH, have retired. Both men are members of Wheeling Local No. 197. **Henry E. George,** signal maintainat Bloomville, OH, and a member of Goodwin Local No. 77 retired. **Gordon L. Tuck,** signal helper, at Greensprings, OH, and a member of King Local No. 201 retired. **Walter F. Wojsiat,** leading signalman at Girard, PA, and a member of Austin Local No. 113 has retired. Also retired are **Raymond Shepherd,** signal maintainer at Burbank, OH and **John M. Sigler,** general inspector, signals and communications at Hudson, OH.

BURLINGTON NORTHERN: **Emmett J. Boyle,** signalman, Minot, SD, has retired. **Adrian Buckland,** signal inspector, Spokane, WA, retired recently. Brothers Boyle and Buckland are members of Great Northern Local No. 154.

MILWAUKEE ROAD: **Joseph H. Cole,** signal maintainer at Tacoma, WA, and a member of Avery Local No. 4, has retired. **Miner L. Larson,** signal maintainer at St. Paul, MN, has retired. Brother Larson is a member of Minneapolis Local No. 220.

SANTA FE: **C. W. Frank,** signal maintainer at Syracuse, KS, and a member of Rocky Mountain Local No. 161, has retired.

ST. LOUIS-SAN FRANCISCO: **P. W. Francis,** signal maintainer, Pacific, MO, and **C. L. Willey,** signalman, Springfield, MO, retired recently. Brothers Francis and Willey are members of Frisco Local No. 129.

SOUTHERN: **Joseph E. Harrington,** signal maintainer at Black Mountain, NC, retired recently. **Jasper T. Highsmith,** signal maintainer at Collierville, TN, retired recently. **Eugene M. Waddey,** signal maintainer at Chattanooga, TN, retired recently. Brothers Harrington, Highsmith and Waddey are members of Walters Local No. 110. **Raymond B. Wilson,** signal maintainer at Sadieville, KY, retired recently. Brother Wilson is a member of Miller-Griffith Local No. 49. **C. S. McMath,** signal maintainer at Leeds, AL, retired recently. Brother McMath is a member of F. B. Stanley Local No. 11.

SOUTHERN PACIFIC: **A. W. Skelton,** signalman, Tucson division, has retired. Brother Skelton is a member of Tucson Local No. 126.

*(Please turn to page 26)*


HOW TO GET THE LATEST

AAR SIGNAL TRAINING BULLETINS

HOT OFF THE PRESS

Ten bulletins of a continuing series of AAR Signal Training Bulletins are now available! They are the first and second groups of reprints being offered in an effort to disseminate the training material researched and produced by the Education and Training Committee G—AAR. These bulletins are designed to provide the railroad industry with the latest educational information.

INVALUABLE

Use them as supplement to your regular training program. Use them as a current prime information source. They will help signal and communication men save materials, time, and money.

ORDER TODAY

Two sets of the bulletins are now available. Order one set, or both, and continue building your source of valuable information until your collection is complete. The first set includes Bulletins C-1 through C-4 which are the first part of a series covering "Relays". When complete, this series will include a total of 22 bulletins. The second set includes Bulletins B-1 through B-6—the first part of a series covering "Energy Distribution".

| Price list for reprints containing: | C-1 through C-4 (8 pages) | B-1 through B-6 (12 pages) |
|---|---|---|
| Single reprints | 50¢ per reprint | 60¢ per reprint. |
| 5 to 24 reprints | 35¢ per reprint | 45¢ per reprint. |
| 25 to 49 reprints | 32¢ per reprint | 42¢ per reprint. |
| 50 or more reprints | 29¢ per reprint | 39¢ per reprint. |

A quality binder available for $3.00 each.

Editor, Railway System Controls,
350 Broadway, New York, N.Y. 10013

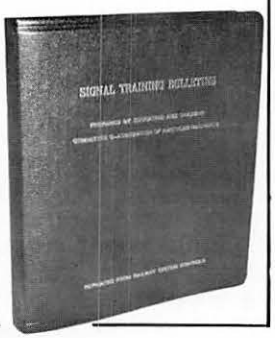
( ) Please send me ___ sets of AAR Signal Training Bulletin reprints consisting of bulletins _____ through _____.
And bulletins _____ through _____.
( ) Please send me _____ binders.
Enclosed is _____ in check or M.O.

Name _____

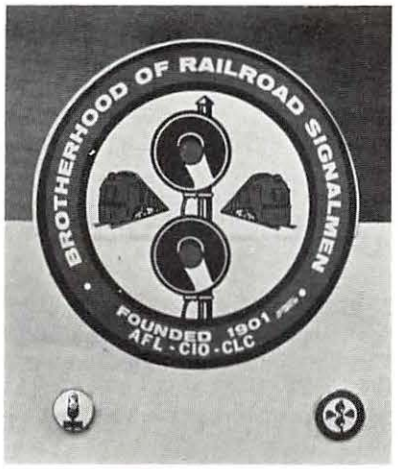
Company _____

Address _____

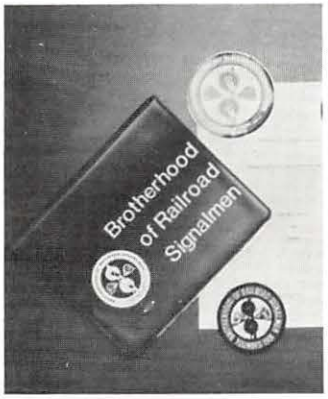
City _____ State _____ Zip _____



# Signalman's Store




**Signalmen's decal** (top) has adhesive backing so it can be applied to glass, leather, metal, etc. for BofRS identification on car windows, bumpers, luggage, hard hats, etc. The emblem is 4" in diameter. It has a red border with white letters. The signal displays green over red. Below left is a metal **dwarf signal lapel pin** ½" in diameter with signal showing green over yellow over red on white enamel background. Signal and pin outlined in gold. Below right is ⅝" **BofRS lapel pin** identical to decal except letters and outline are in gold.




At top is decal with **Master National Agreement Book** below. Green 3-ring binder is 7" by 9" and has 2" diameter rings. Below is **cloth emblem** with BofRS in white letters on red border, two locomotives and green over red searchlight signal.

**Coasters** (3" dia.) come in black and gold, or in white, red and green with BofRS emblem.

## Master National Agreement book has basics

The basic provisions of national agreements negotiated with U.S. railroads and the BofRS are contained in a loose-leaf binder with 2-inch rings so there is room for additional material, such as local agreements. The 21 sections are: A—summary of wage changes; B—summary of other benefits; C—Washington job protection agreement of 1936; D—vacations; E—Union shop agreement; F—Holidays; G—Claim and grievance handling; H—Health and welfare; I—Force reductions; J—Employment security; K—Travel time and away-from-home expenses; L—Off-track vehicle accidents; M—Jury duty; N—Overtime; O—Camp cars; P—Apprentice programs; Q—Change of residence; R—Earnings deduction in discipline cases; S—Supplemental sickness benefits; T—Union dues checkoff; and U—Amtrak C-1, C-2.

## Signalman's training books are available

The 8-volume signalman's training course covers the following subjects: 1—electricity, circuit symbols and nomenclature; 2—signal terms, relays, track circuits and meters; 3—automatic block signaling, time code control and electronics; 4—traffic control systems and power switch machines; 5—highway grade crossing warning systems and FRA RS&I tests; 6—remote control and automatic interlockings; 7—ctc machines and their operation; 8—maintenance of signal equipment.

## *Use this handy order coupon*

Please send me the following items as indicated below:

.....Decals @ 15¢ each.

.....Coaster black and gold) @ 10¢ each.

.....Coaster (red and green) @ 15¢ each.

.....Cloth emblem @ $1.50 each.

.....Dwarf signal lapel pin @ $1.50 each.

.....BofRS red, gold lapel pin @ $2.00 each.

.....Master National Agreement Book @ $7.95 each.

.....Signalman's training books @ $14.00 per 8-volume set.

.....Vol. 1 @ $1.75 each. .....Vol. 5 @ $1.75 each.

.....Vol. 2 @ $1.75 each. .....Vol. 6 @ $1.75 each.

.....Vol. 3 @ $1.75 each. .....Vol. 7 @ $1.75 each.

.....Vol. 4 @ $1.75 each. .....Vol. 8 @ $1.75 each.

**Minimum order accepted is $5.00.** Please make check or money order payable to **R. T. Bates** and send with this coupon to him at **Brotherhood of Railroad Signalmen, 601 W. Golf Road, Mt. Prospect, IL 60056.**

Name .....

Address .....

City..... State (Province)..... Zip.....

# NAM Cont'd

WESTERN PACIFIC: **Larry L. Lawson,** TCS maintainer, Keddie, CA, and **Harry F. Simon,** signal inspector at Sacramento, CA, have received their 25-year service pins. Both men are members of Sacramento Local No. 179. **C. E. Bossen,** assistant signal supervisor, Winnemucca, NV, has received his 10-year service pin.

SEABOARD COAST LINE: **Troy M. Batten,** signal maintainer, Castle Hayne, NC, has retired. **E. L. Campbell,** signal maintainer at Sanford, NC, has retired. **R. L. Crews,** assistant signalman at Savannah, GA, has retired. **William C. Dickinson,** signal cook at Miami, FL, has retired. **Robert A. King,** signal maintainer at Richland, GA, has retired. **William H. Robinson,** signal maintainer, Aberdeen, NC, has retired. All the above brothers are members of Local No. 16.

CENTRAL OF GEORGIA: **L. B. Hardison,** signalman, Leesburg, GA, retired in April. He is a member of Local No. 11.

CHESSIE SYSTEM: **R. J. McCreery,** signal maintainer, at North Vernon, IN, retired March 30, 1974. Brother McCreery is a member of Winton Local No. 94. **Edward Hartsough,** signal maintainer, Akron, OH, retired July 1. **Fred Appleman,** signal maintainer, retired at Columbus, OH, June 28. **Byron Shannon,** signal maintainer at Columbus, OH, retired June 28. **Roy Chalfant,** signal inspector at Newark, OH, retired July 1. Brothers Hartsough, Appleman, Shannon and Chalfant are also members of Local No. 94. **L. Chaney,** signal maintainer at Cumberland, MD, retired March 1. Brother Chaney is a member of Monumental City Local No. 31.

**O. C. Mundey,** signal helper, Western Maryland at Hagerstown, MD, retired June 7. Brother Mundey is a member of Monumental City Local No. 31. **Haven Upton,** assistant signal maintainer at Clifton Forge, VA, retired July 1. He is a member of Clifton Forge Local No. 89. **E. W. Cooke,** signalman at Barboursville, WV, retired March 30. **Floyd Thompson,** lead signalman at Barboursville, WV, retired June 28. Brothers Cooke and Thompson are members of Local 128. **James Hood,** signal inspector, Richmond, VA, retired June 28. He is a member of Richmond Local No. 148.

SOUTHERN PACIFIC: **Louis H. Redmond,** signal foreman, Sacramento Division and a member of Local 179, has retired. **Leland E. Owen,** signal maintainer on the Western Division and a member of Local 153, has retired. **William L. Thomas,** signal maintainer Houston Division and a member of Local 99, has retired.

NORFOLK & WESTERN: **Harley E. Martin,** signal testman at Webster, IN, has retired. **John P. Ritchie,** signalman, has retired. Brothers Martin and Ritchie are members of Wabash Local No. 55. **Eugene C. Mohler,** signalman at Salem, VA, has retired. **Clifton A. Ritter,** assistant signalman at Radford, VA, and **Warren B. Stinson,** signal maintainer at Portsmouth, OH, have retired. Brothers Mohler, Ritter and Stinson are members of Goodwin Local No. 77.

LOUISVILLE & NASHVILLE: **Leon L. Kirk,** signalman at the South Louisville Signal Shop, has retired. Brother Kirk is a member of the Signal Fixers Local No. 207.

ROCK ISLAND: **Heber S. Carson,** signal maintainer on the Des Moines division, has retired after 47 years of service with the railroad. Brother Carson is a member of Pioneer Local No. 23. **Raymond J. LaFoe,** signal testman on the Southern division, has retired after 46 years of service. Brother LaFoe is a member of Martin Local No. 17. **Donald H. McCallum,** signalman at Chicago headquarters, has retired after 29 years of service. Brother McCallum is a member of Rock Island Local No. 183.

UNION PACIFIC: **T. J. Harrison,** CTC maintainer at LaGrange, OR, has retired after 33 years service with the railroad. Brother Harrison is a member of Portland Local No. 155.

SEABOARD COAST LINE: **James F. Turner,** signal maintainer at Richmond Hill, GA and a member of Local 16 has retired.

LOUISVILLE & NASHVILLE: **Herman Mize,** signal helper at Paris, KY, and **Wallace W. Williams,** assistant signal foreman at Richmond, KY, have retired. Brothers Mize and Williams are members of Latonia Local No. 176. **Rufus L. Smith,** signal maintainer at Chattanooga, TN, and **Lawrence M. Turner,** system signal tester at Atlanta, GA, have retired. Brothers Smith and Turner are members of Risedon Local No. 208.

ROCK ISLAND: **Clarence A. Neal,** lead signalman of the Southern division, is retiring after completing 29 years of service. Brother Neal is a member of Martin Local No. 17.

PEORIA & PEKIN UNION: **Roland H. Greenway,** chief signalman for Local 211, has retired.

LOUISVILLE & NASHVILLE: **Oscar L. Reavis,** signal tester for the system, has retired. Brother Reavis is a member of Risedon Local No. 208.

BURLINGTON NORTHERN: **Arthur E. Pethoud,** signalman at Portland, OR, and **Zearl A. Potts,** signal foreman at Wishram, WA, and **Bevel M. Swift,** signal maintainer at Redmond, OR, have retired. Brothers Pethoud, Potts and Swift are members of Vancouver Local No. 188.

SEABOARD COAST LINE: **William B. Alexander,** signal maintainer at Pinehurst, NC, has retired. **Woodrow W. Kelly,** signal foreman at Henderson, NC; **James M. Land,** signal maintainer at Chester, SC; and **Lewis S. Smith,** assistant signal maintainer at Center Hill, FL, have retired. Brothers Alexander, Kelly, Land, and Smith are members of Local No. 16.

PENN CENTRAL: **James M. Buckley,** retired signal maintainer for Pennsylvania at Jersey City, NJ, is hospitalized at Merseyside, England where he has been living with his niece. Brother Buckley would like to hear from his friends. He retired from the former Pennsylvania in 1950 after completing 39 years of service with the railroad. He had been active in BofRS affairs, serving as recording and financial secretary of his local. He can be reached at 9 Clifton Rd., Birkenhead, Merseyside England L4I 2SE.

UNION PACIFIC: **Marvin Katz,** assistant signalman and member of Rock Springs Lodge No. 8 has retired after 23 years with UP.

# Obituaries

**Walter R. Edwards, Sr.,** retired signal maintainer-test, former Pennsylvania now Penn Central, died in December 1974. Brother Edwards retired in 1970 after completing 53 years service with the railroad in Trenton, NJ. Brother Edwards was not only active in Local No. 102 having served as chief signalman, for 20 years as local chairman, he also served as vice general chairman of the East for 12 years.

Surviving are his wife, Mrs. Anna Pratt Edwards; three sons, Walter R., Jr., William P. and Wayne; a brother, Albert W. of St. Bernard, OH; eight grandchildren and several nieces, nephews and cousins.

Brother Edwards was a member of St. Mark United Methodist Church Gothic Lodge No. 270 AM, Trenton Forest No. 4 T.C.L.

The officers and members of Local 102 will miss him dearly and offer their sincere condolences to the members of his family.

**William J. Erler,** 23, signal maintainer at Northbrook, IL for the Milwaukee Road was killed in an automobile accident recently. He had been a signal testman and had worked for the MILW at Appleton, MN. He is survived by his parents, his wife, two bothers and two sisters. Brother Erler was a member of Local No. 219.

**Duane Roger Waite,** signalman, Santa Fe, died December 8, 1974. Brother Waite was a member of Local No. 156. He is survived by his widow, Merle; three sons, Roger, Randy and Ronald; a daughter, Debra; four stepchildren, Michael, Katherine, Danny and Sara Jane; his mother, Esther Richardson of Minnesota; and two sisters and two brothers. Brother Waite, age 40 at the time of his death, lived in Yermo, CA.

**Forrest H. Boyd,** retired signal maintainer, Rock Island Lines, at St. Joseph, MO, died September 6, 1974. He was 76 years of age. Brother Boyd began work in 1916 at Muscatine, IA as a signal helper. He retired June 30, 1967.

He was a long time secretary of Martin Lodge No. 17 and Pioneer Lodge No. 23, having served the Brotherhood more than 25 years as a secretary. He was really one of the members that held Local No. 17 together during the depression, even though he was laid off a good part of this time, and he knew every member's membership number in his local. Also, he served the Rock Island more than 50 years as a helper, construction worker and signal maintainer.

Brother Boyd was an army veteran of World War I and a member of Macdonald-Duggar American Legion Post No. 11, also taking an active part in its affairs. He is survived by his wife, Sybil; one daughter, Mrs. Betty Cremer, Peoria, IL; and a sister, Mrs. Beaulah Claussen, Gladbrook, IA. The officers and members of Local No. 23 of which he was a member, extend their deepest sympathy to his wife and family, as well as Local No. 17, whom he served so faithfully.

Ralph Watkins
Retired G.C. CRI&P

**Thomas C. Loughren,** retired leading signal maintainer at Binghamton, NY, died recently. Brother Loughren had completed over 50 years service with the Delaware, Lackawanna & Western on his retirement in June 1959.

**Floyd F. Robinson,** retired signal maintainer for the St. Louis-San Francisco at Springfield, MO, died recently. Brother Robinson had completed 32 years service with the railroad when he retired in 1970. He was a member of Frisco Local No. 129 and had served as chief signalman and recording and financial secretary of the local.

**Daniel W. Rosenzweig,** signal supervisor on the Lafayette division, Southern Pacific, died recently.

**Samuel Buntain,** signalman on the Western division at Oakland, CA, died recently. Brother Buntain had completed 44 years service with the Southern Pacific when he retired in 1956. He was a member of Oakland Local No. 92.

**Matt W. Roberts,** retired signal maintainer, Carriere, MS, died recently. Brother Roberts completed 36 years of service with the Southern when he retired in 1948. At the time of his retirement he was a signal maintainer at Tumberton, MS. He was a member of Miller-Griffith Local No. 49.

**L. B. McCune,** retired signal engineer, Santa Fe, Amarillo, TX, died recently.

**Steven W. Simone,** signal maintainer, Western division, Southern Pacific, died recently. He was a member of Oakland Local No. 92.

**Daniel J. Sullivan,** secretary and treasurer of the Brotherhood of Railway and Airline Clerks, died recently.

**John A. Berry,** retired signal maintainer, Southern, at Stockbridge, GA, died recently. He was a member of Miller-Griffith Local No. 49.

**Weldon L. Hill,** retired assistant signalman at Lynchburg, VA, died recently. Brother Hill retired in 1968 after completing 25 years of service with the Southern. He was a member of Walters Local No. 110.

**Einar Askeland,** retired signal maintainer, at Fremont, NE, died recently. He was a member of Local No. 43 and had completed 53 years of service with the Chicago and North Western when he retired in 1960.

**P. C. Crowder,** retired signalman, Kansas City Terminal, died October 15, 1974 at the age of 85. Brother Crowder had served for 50 years in the KCT signal department when he retired in 1965. He is survived by his wife, a brother and sister, to whom the officers and members of Kansas City Local No. 21 extend their deepest sympathy.

**Robert F. Hazen,** signalman for the Eire Lackawanna, died recently. Brother Hazen was 60 years of age and was working in Test Gang No. 50 for the railroad. The officers and members of Deposit Lodge No. 145 extend their deepest sympathy to his family.

**John J. Klecha,** signal maintainer at Kingston, PA, Erie Lackawanna, died recently. Brother Klecha was 58 years of age. The officers and members of Deposit Local 145 extend their deepest sympathy to Brother Klecha's family.

# Canada

## QNS&L men work in the far northeast

*The following story (one in French, the other in English) is from Iron Ore Co. of Canada's "Iron Ore Dialogue" which tells about the work of communications and signalmen on the Quebec, North Shore & Labrador Railway.*

No story on "the line" would be complete without some mention of Communications and Signals. Of the one hundred and thirty or so of these QNS&L people who work under Superintendent Andre Michaud, some 49 men work on the line. Other members of the department carry out their jobs in the terminal plants in Labrador City, Schefferville and Sept-Iles, or work for the control centre, or in a "Special problems" section.

The operation of the railway revolves around two prime considerations; namely optimum efficiency in performing its function of transferring iron ore from the mines to the loading docks, and to do so with a maximum of safety, and a minimum of hazard. These objectives are accomplished in large part by the 49 men of Communications and Signals who work on the line. They are divided into two sections: 31 of them under supervisor Gaetan Asselin look after heavy maintenance and construction, working out of Sept-Iles, while 15 under supervisor Doug McPhee are divided into flying crews to take care of routine maintenance troubles. These crews made up of a foreman and two technicians with a helicopter and pilot are situated at Tika, Waco, Ross Bay Junction and Esker. Home base for Tika and Waco is Sept-Iles, for Ross Bay Junction its Labrador City and for Esker it's Schefferville. These people look after the things that wear out, replace those that go wrong and take care of the equipment that is exposed to the elements. Mr. Michaud told us that the actual electronics are very very reliable and very seldom give trouble. If however problems do develop then special technicians are sent up from the Sept-Iles centre.

At one time Communications and Signals crews moved along the line by motor car, but with the very much increased traffic they are unable to get track time. So the helicopter crews with their independent mode of travel are able to cut down on outage time.

Although with seniority men of the Communications and Signals crews tend to move on to jobs in Sept-Iles there are still some on the line with many years of service. G. A. Driscol, foreman of Crew # 34 is one, with 18½ years to his credit. Foreman G. S. Miller of Crew # 31 will reach his 13th anniversary in February, while another man with nearly thirteen years service is B. Migneault, the "oldest" member of the nine-man signal crew # 23.

The C&S men are members of BofRS Local 217.

## Leurs hommes sur la ligne

Aucun reportage de "la ligne" ne serait complet sans parler des Telecommunications et Signaux. Des quelque cent trente personnes du QNS&L qui relevent d'Andre Michaud, surintendant, 49 travaillent le long de la ligne. Les autres membres du departement sont employes dans les installations des terminus de Labrador City, Schefferville et Sept-Iles ou travaillent au centre de commande, ou a la section des "problemes speciaux".

L'exploitation du chemin de fer pivote autour de deux considerations primordiales, a savoir un rendement optimal dans l'execution de sa fonction d'acheminer du minerai de fer des mines aux quais de chargement et de le faire avec un maximum de securite et un minimum de danger. Les 49 hommes de Telecommunications et Signaux qui travaillent le long de la ligne accomplissent en grande partie ces objectifs. Ils sont divises en deux sections: 31 d'entre eux sous la tutelle de Gaetan Asselin, superviseur, s'occupent de l'entretien lourd et de la construction. Leur base d'attache est Sept-Iles. Quinze autres, sous Doug McPhee, superviseur, sont divises en equipes volantes et s'occupent des depannages ordinaires d'entretien. Ces equipes composees d'un contremaitre et de deux techniciens, avec un helicoptere et son pilote, se retrouvent a Tika. Waco, la jonction de Ross Bay et Esker. La base d'attache pour Tika et Waco est Sept-Iles; celle de la jonction de Ross Bay est Labrador City et pour Esker c'est Schefferville. Ces gens se preoccupent des choses qui s'usent, remplacent celles qui font defaut et prennent soin de l'equipement expose aux elements. M. Michaud nous a dit que l'electronique moderne est tres fiable et tombe rarement en panne. Si des problemes surgissent, on y depeche des techniciens speciaux du centre de Sept-Iles.

Il fut un temps ou les equipes des Telecommunications et Signaux se deplacaient le long de la ligne en draisine, mais avec le trafic ferroviaire grandissant, ils ont maintenant recours a l'helicoptere et gagnent du temps.

Cependant, a cause de l'ancienete, les hommes de ces equipes tendent a prendre des postes a Sept-Iles. Il en demeure pas moins beaucoup d'autres, le long de la ligne, avec plusieurs annees de service. G. A. Driscol, contremaitre de l'equipe # 34 en est un de ceux-la et a 18½ ans a son credit. G. S. Miller, contremaitre de l'equipe # 31 fetera son 13 ieme anniversaire en fevrier prochain, tandis qu'un autre, avec pres de treize ans de service, B. Migneault est le "plus vieux des anciens" de l'equipe # 23, composee de neuf hommes.


***For Canadian residents only:***

**Moving? Let us know!**

Please send your new address to:

**J. E. DuBois, Brotherhood of Railroad Signalmen, 1396 St. Catherine St. W., Suite 323, Montreal, Que. H3G 1P9**

**Name** _____

**Street or Box No.** _____ **Apt. No.** _____

**City** _____ **Province** _____ **Zip** _____

**Lodge No.** _____ **Certificate No.** _____

# Attorneys can help you under FELA

Members who are injured on the job and the dependents of those members who have been killed or have died as the result of such injuries should by all means ascertain their rights and benefits under the Federal Employers' Liability Act before attempting any settlement with the railroad.

Below is a list of attorneys who, on the basis of information made available to us, are competent to give full information and assistance to those in need of it.

This list is compiled and maintained on the strength of information furnished us by both attorneys and members. The accuracy of the list that we will publish from time to time depends entirely on the information furnished us. Therefore, everyone concerned is urged to keep us informed regarding cases handled, nature of the case, terms of the settlement, commendations, criticisms, etc.

**This information should be forwarded to C. J. Chamberlain, president, Brotherhood of Railroad Signalmen, 601 West Golf Road, Mt. Prospect, IL 60056.**

**Aurora, CO 80010**
John J. Rossi, Morrisard & Rossi, 1901 Peoria St., Suite 202
Tel. (303) 364-9369

**Baltimore, MD 21202**
Savage, Jones, Tingle & Schwartzman, 10 Light St., 30th Floor, Maryland National Bank Bldg.
Tel. (301) 685-2713

**Bergenfield, NJ 07621**
Charles J. Tyne, 104 North Washington Ave.
Tel. (201) 384-9433

**Birmingham, AL 35203**
Rives, Peterson, Pettus, Conway & Burge, 800 First National-Southern Natural Bldg., 1900 Fifth Ave., North
Tel. (205) 328-8141

**Boston, MA 02108**
Francis H. Farrell, Suite 701, Old South Bldg.
294 Washington St.
Tel. (617) 542-3270

**Chicago, IL 60602**
Henslee, Monek and Henslee, 120 Madison Bldg.
Tel. (312) 782-5925

**Cleveland, OH 44114**
Gaines & Stern Co. L. P. A.
1700 Investment Plaza,
1801 East 9th St.
Tel. (216) 696-4666

**Denver, CO 80202**
Alex Stephen Keller,
316 Symes Bldg.
Tel. (303) 255-2603

**Denver, CO 80030**
Ratner, Mattox, Ratner, Ratner & Barnes, 3090 West 72nd Ave., Westminster
Tel. (303) 427-1414

**Houston, TX 77002**
Downman, Jones & Schechter
1200 Houston First Savings Bldg.
Tel. (713) 224-3366

**Houston, TX 77002**
George L. Schmidt, Schmidt, Matthews & Madigan, Houston Bar Center Bldg., 723 Main St., Suite 810
Tel. (713) 233-4466

**Indianapolis, IN 46204**
Edward J. Erpelding,
111 Monument Circle, Suite 500
Tel. (317) 632-4437

**Kansas City, MO 64105**
Norman R. Jones, Suite 1420, Commerce Tower, 911 Main St.
Tel. (816) 421-5411

**Kansas City, KS 66101**
Ratner, Mattox, Ratner, Ratner & Barnes, 804 Huron Bldg.
Tel. (913) 321-2619

**Los Angeles, CA 90013**
Clifton Hildebrand, 304 South Broadway, Suite 424
Tel. (213) 629-2214

**Los Angeles, CA 90036**
Bodle, Fogel, Julber, Reinhardt and Rothschild, 5900 Wilshire Blvd., Suite 2600
Tel. (213) 937-6250

**Miami Beach, FL 33141**
Hastings & Goldman
300 71st St., Suite 530
Tel. (305) 861-4971

**Minneapolis, MN 55402**
Rerat, Crill, Foley & Boursier, 656 IDS Center, 80 South Eighth St.
Tel. (612) 339-9231

**New York, NY 10017**
Elkind, Lampson & Sable
122 East 42nd Street
Tel. (212) 986-4921

**Oakland, CA 94612**
Frederick L. Nelson; Hildebrand, McLeod & Nelson, Inc.
1212 Broadway
Tel. (415) 451-6732

**Pittsburgh, PA 15219**
Evans, Ivory & Evans,
711 Frick Bldg.
Tel. (412) 471-3740

**Portland, OR 97204**
Carlton R. Reiter
Reiter, Wall, Bricker & Zakovics, P.C.
1200 Wilcox Building
Tel. (503) 226-1151

**Salt Lake City, UT 84101**
Wayne L. Black, Suite 400, Ten West Third South St.
Tel. (801) 328-9741

**San Antonio, TX 78205**
George L. Schmidt, 1500 NBC Bldg.
Tel. (512) 227-7565

**Syracuse, NY 13202**
J. Murray Dunn,
707 State Tower Bldg.
Tel. (315) 422-0303

**Tucson, AZ 85719**
John P. Somers, 2016 East Broadway
Tel. (602) 623-6111

**Vicksburg, MS 39180**
Ramsey, Bodron & Thames, Suite 7, First National Bank Bldg.
Tel. (601) 636-5561

**Wichita, KS 67201**
Ratner, Mattox, Ratner, Ratner & Barnes, 444 North Market, P.O. Box 306
Tel. (316) 262-6423

**Wichita, KS 67202**
John C. Frank,
615 Union National Bldg.
Tel. (316) 264-0346

# Signalman's Worksheet

## A-C track circuits and relays

**Double-Element Vane Relay Operation**

In the double-element vane relay, two electromagnetic structures are used, one on either side of the vane. The electromagnets are constantly energized while the relay is picked up, but the magnetism produced by one of the electromagnets lags in time with respect to the other. The reaction on the vane of the two independent magnetisms, which are out of step, produces rotation, the same as that produced by the moving permanent magnet in Figure 116.

Figure 119 shows a complete cycle of local and track currents plotted with the track current lagging the local current. Reference lines A, B, C, etc., divide up the complete alternating current cycle into eighths, and the small figures represent instantaneous pictures or "snapshots" of what is happening in the magnetic circuit of the relay at these particular instances.

At A and A' the local current is at a positive maximum value, the track current is zero. The local winding is producing all the magnetic lines of force and their paths are shown by the dotted lines. Notice the solid arrow (which is accentuated merely for reference and not because the lines of force are concentrated in that particular path). Compare the position of this arrow in the "snapshots" and see how IT MOVES ACROSS THE WHOLE LENGTH OF THE AIR GAP, cutting through and across the vane, much the same as the magnetic lines of force of the permanent magnet in Figure 116. All the other arrows do the same. Here, then, is the counterpart of the moving permanent magnet, only in this case the magnetic structures are stationary and THE ALTERNATING CURRENT PRODUCES THE MAGNETIC FLUX MOTION.

The direction of movement of the vane depends upon the relative instantaneous polarities of the currents in the local and track coils. Reversing the energy leads to the terminals of either coil will reverse the direction of movement of the vane. Thus 2-element relays can be made 3-position.

*Information and drawings furnished by General Railway Signal Company.*

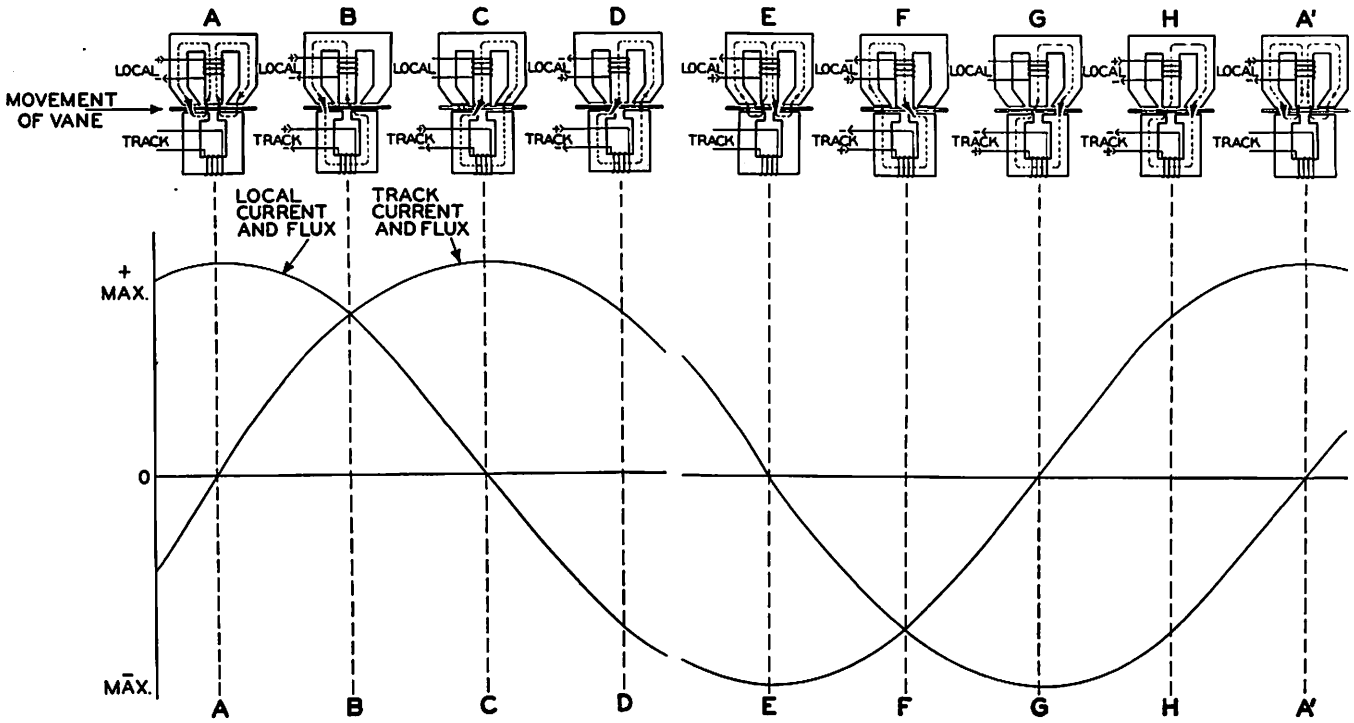



**FIG. 119—Theory of operation of double-element vane relay.**

# Obituaries

**Walter R. Edwards, Sr.,** retired signal maintainer-test, former Pennsylvania now Penn Central, died in December 1974. Brother Edwards retired in 1970 after completing 53 years service with the railroad in Trenton, NJ. Brother Edwards was not only active in Local No. 102 having served as chief signalman, for 20 years as local chairman, he also served as vice general chairman of the East for 12 years.

Surviving are his wife, Mrs. Anna Pratt Edwards; three sons, Walter R., Jr., William P. and Wayne; a brother, Albert W. of St. Bernard, OH; eight grandchildren and several nieces, nephews and cousins.

Brother Edwards was a member of St. Mark United Methodist Church Gothic Lodge No. 270 AM, Trenton Forest No. 4 T.C.L.

The officers and members of Local 102 will miss him dearly and offer their sincere condolences to the members of his family.

**William J. Erler,** 23, signal maintainer at Northbrook, IL for the Milwaukee Road was killed in an automobile accident recently. He had been a signal testman and had worked for the MILW at Appleton, MN. He is survived by his parents, his wife, two bothers and two sisters. Brother Erler was a member of Local No. 219.

**Duane Roger Waite,** signalman, Santa Fe, died December 8, 1974. Brother Waite was a member of Local No. 156. He is survived by his widow, Merle; three sons, Roger, Randy and Ronald; a daughter, Debra; four stepchildren, Michael, Katherine, Danny and Sara Jane; his mother, Esther Richardson of Minnesota; and two sisters and two brothers. Brother Waite, age 40 at the time of his death, lived in Yermo, CA.

**Forrest H. Boyd,** retired signal maintainer, Rock Island Lines, at St. Joseph, MO, died September 6, 1974. He was 76 years of age. Brother Boyd began work in 1916 at Muscatine, IA as a signal helper. He retired June 30, 1967.

He was a long time secretary of Martin Lodge No. 17 and Pioneer Lodge No. 23, having served the Brotherhood more than 25 years as a secretary. He was really one of the members that held Local No. 17 together during the depression, even though he was laid off a good part of this time, and he knew every member's membership number in his local. Also, he served the Rock Island more than 50 years as a helper, construction worker and signal maintainer.

Brother Boyd was an army veteran of World War I and a member of Macdonald-Duggar American Legion Post No. 11, also taking an active part in its affairs. He is survived by his wife, Sybil; one daughter, Mrs. Betty Cremer, Peoria, IL; and a sister, Mrs. Beaulah Claussen, Gladbrook, IA. The officers and members of Local No. 23 of which he was a member, extend their deepest sympathy to his wife and family, as well as Local No. 17, whom he served so faithfully.

Ralph Watkins
Retired G.C. CRI&P

**Thomas C. Loughren,** retired leading signal maintainer at Binghamton, NY, died recently. Brother Loughren had completed over 50 years service with the Delaware, Lackawanna & Western on his retirement in June 1959.

**Floyd F. Robinson,** retired signal maintainer for the St. Louis-San Francisco at Springfield, MO, died recently. Brother Robinson had completed 32 years service with the railroad when he retired in 1970. He was a member of Frisco Local No. 129 and had served as chief signalman and recording and financial secretary of the local.

**Daniel W. Rosenzweig,** signal supervisor on the Lafayette division, Southern Pacific, died recently.

**Samuel Buntain,** signalman on the Western division at Oakland, CA, died recently. Brother Buntain had completed 44 years service with the Southern Pacific when he retired in 1956. He was a member of Oakland Local No. 92.

**Matt W. Roberts,** retired signal maintainer, Carriere, MS, died recently. Brother Roberts completed 36 years of service with the Southern when he retired in 1948. At the time of his retirement he was a signal maintainer at Tumberton, MS. He was a member of Miller-Griffith Local No. 49.

**L. B. McCune,** retired signal engineer, Santa Fe, Amarillo, TX, died recently.

**Steven W. Simone,** signal maintainer, Western division, Southern Pacific, died recently. He was a member of Oakland Local No. 92.

**Daniel J. Sullivan,** secretary and treasurer of the Brotherhood of Railway and Airline Clerks, died recently.

**John A. Berry,** retired signal maintainer, Southern, at Stockbridge, GA, died recently. He was a member of Miller-Griffith Local No. 49.

**Weldon L. Hill,** retired assistant signalman at Lynchburg, VA, died recently. Brother Hill retired in 1968 after completing 25 years of service with the Southern. He was a member of Walters Local No. 110.

**Einar Askeland,** retired signal maintainer, at Fremont, NE, died recently. He was a member of Local No. 43 and had completed 53 years of service with the Chicago and North Western when he retired in 1960.

**P. C. Crowder,** retired signalman, Kansas City Terminal, died October 15, 1974 at the age of 85. Brother Crowder had served for 50 years in the KCT signal department when he retired in 1965. He is survived by his wife, a brother and sister, to whom the officers and members of Kansas City Local No. 21 extend their deepest sympathy.

**Robert F. Hazen,** signalman for the Eire Lackawanna, died recently. Brother Hazen was 60 years of age and was working in Test Gang No. 50 for the railroad. The officers and members of Deposit Lodge No. 145 extend their deepest sympathy to his family.

**John J. Klecha,** signal maintainer at Kingston, PA, Erie Lackawanna, died recently. Brother Klecha was 58 years of age. The officers and members of Deposit Local 145 extend their deepest sympathy to Brother Klecha's family.

# Canada

## QNS&L men work in the far northeast

*The following story (one in French, the other in English) is from Iron Ore Co. of Canada's "Iron Ore Dialogue" which tells about the work of communications and signalmen on the Quebec, North Shore & Labrador Railway.*

No story on "the line" would be complete without some mention of Communications and Signals. Of the one hundred and thirty or so of these QNS&L people who work under Superintendent Andre Michaud, some 49 men work on the line. Other members of the department carry out their jobs in the terminal plants in Labrador City, Schefferville and Sept-Iles, or work for the control centre, or in a "Special problems" section.

The operation of the railway revolves around two prime considerations; namely optimum efficiency in performing its function of transferring iron ore from the mines to the loading docks, and to do so with a maximum of safety, and a minimum of hazard. These objectives are accomplished in large part by the 49 men of Communications and Signals who work on the line. They are divided into two sections: 31 of them under supervisor Gaetan Asselin look after heavy maintenance and construction, working out of Sept-Iles, while 15 under supervisor Doug McPhee are divided into flying crews to take care of routine maintenance troubles. These crews made up of a foreman and two technicians with a helicopter and pilot are situated at Tika, Waco, Ross Bay Junction and Esker. Home base for Tika and Waco is Sept-Iles, for Ross Bay Junction its Labrador City and for Esker it's Schefferville. These people look after the things that wear out, replace those that go wrong and take care of the equipment that is exposed to the elements. Mr. Michaud told us that the actual electronics are very very reliable and very seldom give trouble. If however problems do develop then special technicians are sent up from the Sept-Iles centre.

At one time Communications and Signals crews moved along the line by motor car, but with the very much increased traffic they are unable to get track time. So the helicopter crews with their independent mode of travel are able to cut down on outage time.

Although with seniority men of the Communications and Signals crews tend to move on to jobs in Sept-Iles there are still some on the line with many years of service. G. A. Driscol, foreman of Crew # 34 is one, with 18½ years to his credit. Foreman G. S. Miller of Crew # 31 will reach his 13th anniversary in February, while another man with nearly thirteen years service is B. Migneault, the "oldest" member of the nine-man signal crew # 23.

The C&S men are members of BofRS Local 217.

## Leurs hommes sur la ligne

Aucun reportage de "la ligne" ne serait complet sans parler des Telecommunications et Signaux. Des quelque cent trente personnes du QNS&L qui relevent d'Andre Michaud, surintendant, 49 travaillent le long de la ligne. Les autres membres du departement sont employes dans les installations des terminus de Labrador City, Schefferville et Sept-Iles ou travaillent au centre de commande, ou a la section des "problemes speciaux".

L'exploitation du chemin de fer pivote autour de deux considerations primordiales, a savoir un rendement optimal dans l'execution de sa fonction d'acheminer du minerai de fer des mines aux quais de chargement et de le faire avec un maximum de securite et un minimum de danger. Les 49 hommes de Telecommunications et Signaux qui travaillent le long de la ligne accomplissent en grande partie ces objectifs. Ils sont divises en deux sections: 31 d'entre eux sous la tutelle de Gaetan Asselin, superviseur, s'occupent de l'entretien lourd et de la construction. Leur base d'attache est Sept-Iles. Quinze autres, sous Doug McPhee, superviseur, sont divises en equipes volantes et s'occupent des depannages ordinaires d'entretien. Ces equipes composees d'un contremaitre et de deux techniciens, avec un helicoptere et son pilote, se retrouvent a Tika. Waco, la jonction de Ross Bay et Esker. La base d'attache pour Tika et Waco est Sept-Iles; celle de la jonction de Ross Bay est Labrador City et pour Esker c'est Schefferville. Ces gens se preoccupent des choses qui s'usent, remplacent celles qui font defaut et prennent soin de l'equipement expose aux elements. M. Michaud nous a dit que l'electronique moderne est tres fiable et tombe rarement en panne. Si des problemes surgissent, on y depeche des techniciens speciaux du centre de Sept-Iles.

Il fut un temps ou les equipes des Telecommunications et Signaux se deplacaient le long de la ligne en draisine, mais avec le trafic ferroviaire grandissant, ils ont maintenant recours a l'helicoptere et gagnent du temps.

Cependant, a cause de l'ancienete, les hommes de ces equipes tendent a prendre des postes a Sept-Iles. Il en demeure pas moins beaucoup d'autres, le long de la ligne, avec plusieurs annees de service. G. A. Driscol, contremaitre de l'equipe # 34 en est un de ceux-la et a 18½ ans a son credit. G. S. Miller, contremaitre de l'equipe # 31 fetera son 13 ieme anniversaire en fevrier prochain, tandis qu'un autre, avec pres de treize ans de service, B. Migneault est le "plus vieux des anciens" de l'equipe # 23, composee de neuf hommes.


***For Canadian residents only:***

**Moving? Let us know!**

Please send your new address to:

**J. E. DuBois, Brotherhood of Railroad Signalmen, 1396 St. Catherine St. W., Suite 323, Montreal, Que. H3G 1P9**

**Name** _____

**Street or Box No.** _____ **Apt. No.** _____

**City** _____ **Province** _____ **Zip** _____

**Lodge No.** _____ **Certificate No.** _____

# Attorneys can help you under FELA

Members who are injured on the job and the dependents of those members who have been killed or have died as the result of such injuries should by all means ascertain their rights and benefits under the Federal Employers' Liability Act before attempting any settlement with the railroad.

Below is a list of attorneys who, on the basis of information made available to us, are competent to give full information and assistance to those in need of it.

This list is compiled and maintained on the strength of information furnished us by both attorneys and members. The accuracy of the list that we will publish from time to time depends entirely on the information furnished us. Therefore, everyone concerned is urged to keep us informed regarding cases handled, nature of the case, terms of the settlement, commendations, criticisms, etc.

**This information should be forwarded to C. J. Chamberlain, president, Brotherhood of Railroad Signalmen, 601 West Golf Road, Mt. Prospect, IL 60056.**

**Aurora, CO 80010**
John J. Rossi, Morrisard & Rossi, 1901 Peoria St., Suite 202
Tel. (303) 364-9369

**Baltimore, MD 21202**
Savage, Jones, Tingle & Schwartzman, 10 Light St., 30th Floor, Maryland National Bank Bldg.
Tel. (301) 685-2713

**Bergenfield, NJ 07621**
Charles J. Tyne, 104 North Washington Ave.
Tel. (201) 384-9433

**Birmingham, AL 35203**
Rives, Peterson, Pettus, Conway & Burge, 800 First National-Southern Natural Bldg., 1900 Fifth Ave., North
Tel. (205) 328-8141

**Boston, MA 02108**
Francis H. Farrell, Suite 701, Old South Bldg.
294 Washington St.
Tel. (617) 542-3270

**Chicago, IL 60602**
Henslee, Monek and Henslee, 120 Madison Bldg.
Tel. (312) 782-5925

**Cleveland, OH 44114**
Gaines & Stern Co. L. P. A.
1700 Investment Plaza,
1801 East 9th St.
Tel. (216) 696-4666

**Denver, CO 80202**
Alex Stephen Keller,
316 Symes Bldg.
Tel. (303) 255-2603

**Denver, CO 80030**
Ratner, Mattox, Ratner, Ratner & Barnes, 3090 West 72nd Ave., Westminster
Tel. (303) 427-1414

**Houston, TX 77002**
Downman, Jones & Schechter
1200 Houston First Savings Bldg.
Tel. (713) 224-3366

**Houston, TX 77002**
George L. Schmidt, Schmidt, Matthews & Madigan, Houston Bar Center Bldg., 723 Main St., Suite 810
Tel. (713) 233-4466

**Indianapolis, IN 46204**
Edward J. Erpelding,
111 Monument Circle, Suite 500
Tel. (317) 632-4437

**Kansas City, MO 64105**
Norman R. Jones, Suite 1420, Commerce Tower, 911 Main St.
Tel. (816) 421-5411

**Kansas City, KS 66101**
Ratner, Mattox, Ratner, Ratner & Barnes, 804 Huron Bldg.
Tel. (913) 321-2619

**Los Angeles, CA 90013**
Clifton Hildebrand, 304 South Broadway, Suite 424
Tel. (213) 629-2214

**Los Angeles, CA 90036**
Bodle, Fogel, Julber, Reinhardt and Rothschild, 5900 Wilshire Blvd., Suite 2600
Tel. (213) 937-6250

**Miami Beach, FL 33141**
Hastings & Goldman
300 71st St., Suite 530
Tel. (305) 861-4971

**Minneapolis, MN 55402**
Rerat, Crill, Foley & Boursier, 656 IDS Center, 80 South Eighth St.
Tel. (612) 339-9231

**New York, NY 10017**
Elkind, Lampson & Sable
122 East 42nd Street
Tel. (212) 986-4921

**Oakland, CA 94612**
Frederick L. Nelson; Hildebrand, McLeod & Nelson, Inc.
1212 Broadway
Tel. (415) 451-6732

**Pittsburgh, PA 15219**
Evans, Ivory & Evans,
711 Frick Bldg.
Tel. (412) 471-3740

**Portland, OR 97204**
Carlton R. Reiter
Reiter, Wall, Bricker & Zakovics, P.C.
1200 Wilcox Building
Tel. (503) 226-1151

**Salt Lake City, UT 84101**
Wayne L. Black, Suite 400, Ten West Third South St.
Tel. (801) 328-9741

**San Antonio, TX 78205**
George L. Schmidt, 1500 NBC Bldg.
Tel. (512) 227-7565

**Syracuse, NY 13202**
J. Murray Dunn,
707 State Tower Bldg.
Tel. (315) 422-0303

**Tucson, AZ 85719**
John P. Somers, 2016 East Broadway
Tel. (602) 623-6111

**Vicksburg, MS 39180**
Ramsey, Bodron & Thames, Suite 7, First National Bank Bldg.
Tel. (601) 636-5561

**Wichita, KS 67201**
Ratner, Mattox, Ratner, Ratner & Barnes, 444 North Market, P.O. Box 306
Tel. (316) 262-6423

**Wichita, KS 67202**
John C. Frank,
615 Union National Bldg.
Tel. (316) 264-0346

# Signalman's Worksheet

## A-C track circuits and relays

**Double-Element Vane Relay Operation**

In the double-element vane relay, two electromagnetic structures are used, one on either side of the vane. The electromagnets are constantly energized while the relay is picked up, but the magnetism produced by one of the electromagnets lags in time with respect to the other. The reaction on the vane of the two independent magnetisms, which are out of step, produces rotation, the same as that produced by the moving permanent magnet in Figure 116.

Figure 119 shows a complete cycle of local and track currents plotted with the track current lagging the local current. Reference lines A, B, C, etc., divide up the complete alternating current cycle into eighths, and the small figures represent instantaneous pictures or "snapshots" of what is happening in the magnetic circuit of the relay at these particular instances.

At A and A' the local current is at a positive maximum value, the track current is zero. The local winding is producing all the magnetic lines of force and their paths are shown by the dotted lines. Notice the solid arrow (which is accentuated merely for reference and not because the lines of force are concentrated in that particular path). Compare the position of this arrow in the "snapshots" and see how IT MOVES ACROSS THE WHOLE LENGTH OF THE AIR GAP, cutting through and across the vane, much the same as the magnetic lines of force of the permanent magnet in Figure 116. All the other arrows do the same. Here, then, is the counterpart of the moving permanent magnet, only in this case the magnetic structures are stationary and THE ALTERNATING CURRENT PRODUCES THE MAGNETIC FLUX MOTION.

The direction of movement of the vane depends upon the relative instantaneous polarities of the currents in the local and track coils. Reversing the energy leads to the terminals of either coil will reverse the direction of movement of the vane. Thus 2-element relays can be made 3-position.

*Information and drawings furnished by General Railway Signal Company.*

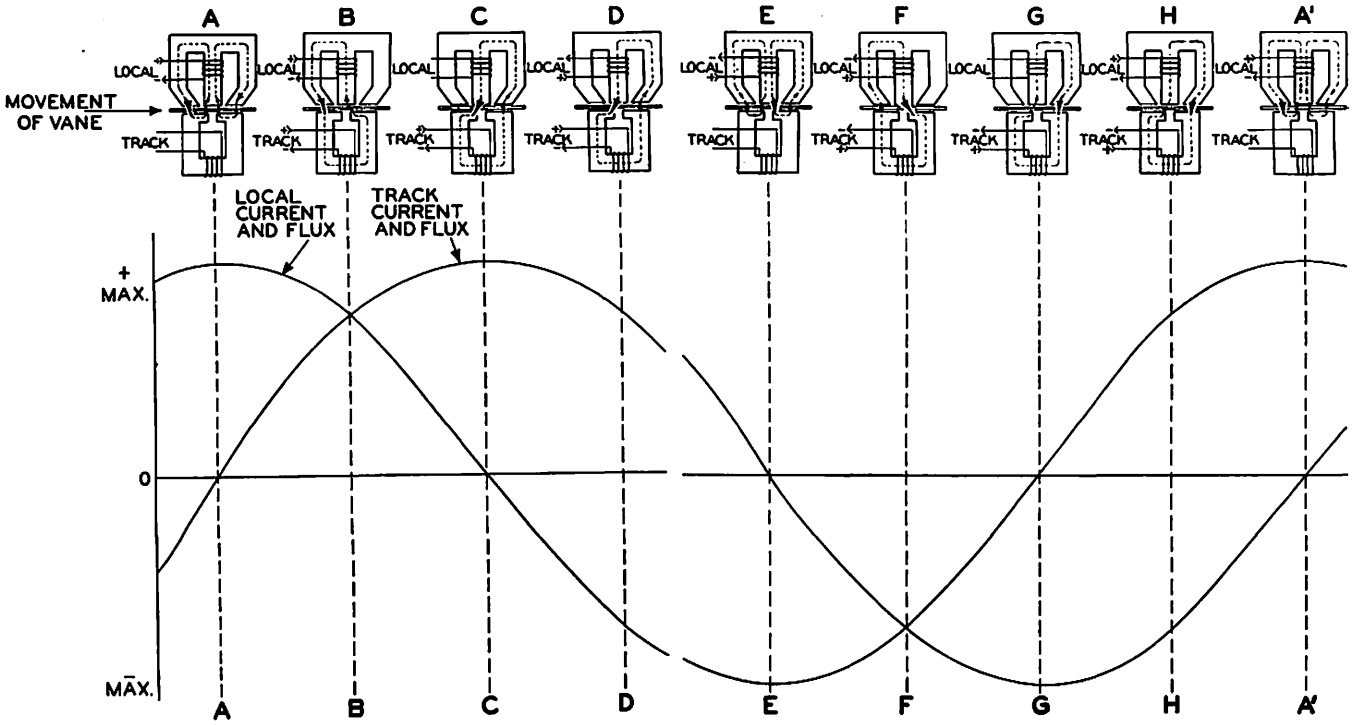



**FIG. 119—Theory of operation of double-element vane relay.**

# GRS TRACK QUALITY METER

## MEASURES TRACK BALLAST RESISTANCE QUICKLY AND EASILY

The GRS track quality meter can quickly determine ballast resistance thus cut cost and save time in maintenance and installation of track circuits. Simply clamp the track leads across the rails, position the switches, and adjust the BALANCE control – the BALANCE control digital reading can be translated directly into ballast resistance using the calibrated graph. IT'S THAT EASY!

Only 2 track connections necessary for ballast resistance and track current measurements.

And with the accessory current probe, the meter can just as easily determine track uniformity, low resistance pockets (as may occur at highway crossings), and switch rod insulation and insulated joint efficiencies.

Solid-state circuits, a sturdy light-weight fiber glass carrying case, and its own battery pack make the GRS track quality meter a durable instrument suited for field use.

For more information, write for GRS Catalog 92-6.

**GENERAL RAILWAY SIGNAL COMPANY**

**A UNIT OF GENERAL SIGNAL**

ROCHESTER NEW YORK 14602

ATLANTA BOSTON CHICAGO MONTREAL NEW YORK OAKLAND ST LOUIS ST PAUL WASHINGTON

3596

*No. 1 on today's new signaling programs —*

# IMPROVED HIGHWAY GRADE CROSSING PROTECTION

In every new (or up-graded) installation, reliable power is all-important in keeping the crossing protection in operation, at all times.

That's why you need as dependable a system as you can get:

**The EDISON System - - - a combination of**

# EDISON *Nickel-cadmium* STORAGE BATTERIES

**and compatible**

# EDISON automatic BATTERY CHARGERS

**Dependable because**
Batteries are rated on the *safe*, conservative side for long life performance.

Chargers are all solid state and feature the peak point-float mode to assure a fully charged battery at all times. Several models are temperature compensated.

**Economical because**
Battery cases and covers are rugged, transparent plastic which permits labor-saving, *visual* maintenance.

Chargers operate automatically after original installation is made.

**Versatile because**
There is a full line of batteries and chargers to meet the power requirements of *any* installation. Batteries: six types with capacities from 80 to 400 A.H. Chargers: five models with outputs from 1.5 to 40 amps.

*For complete information write*

McGRAW EDISON COMPANY
Edison Battery Division
Bloomfield, N.J. 07003
(201) 751-3700
Telex 139168